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The Wireless Road Ahead

Totally Unplugged In 2007

by Chris A. MacKinnon

• • •

THE YEAR 2007 should prove to be impressive in the wireless and mobility space. According to Michael Moore, senior director of business development at iPass (www.ipass.com), wireless technologies have historically lagged behind the wireline alternatives, both in availability and performance. But Moore says we are beginning to see wireless technologies bridge that gap. Of the trends we should watch for in 2007, he says the most significant will be abundance—of bandwidth and of choices.

Trendsetters

Moore notes that in markets across Europe, mobile operators have launched HSDPA (high-speed downlink packet access) over cellular networks, offering download speeds up to 1.8Mbps, with cell phone-like coverage in high-density areas. He says in Asia operators are trying mobile WiMAX (802.16e), which offers from 50% to three times the throughput improvement over 3G, and in the United States, mesh Wi-Fi networks have been deployed covering metro areas in Anaheim, Calif., New Orleans, and more.

Moore says we can look forward to users no longer being constrained by their home broadband connection or the need to find a hotspot. He says, "Broadband, at least in the major metros, is on its way to becoming truly ubiquitous. The challenges for IT departments and their users will be how to effectively manage these multiple emerging technologies while ensuring the integrity of the devices and data that leverage them."

Greg Murphy, COO for AirWave Wireless (www.airwave.com), says the key trends his company sees in the enterprise

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Apple & The Enterprise

The New Kid On The Block Makes An Impression

by Robyn Weisman

• • •

DID YOU KNOW Apple sells servers?

Yes, the maker of the ubiquitous iPod and those cute iMacs (www.apple.com) sells 1U servers that sport two dual-core Intel Xeon processors; three hard drive bays that support SATA and SAS configurations; and an OS with an unlimited client license that is BSD Unix-based, uses open standards (see chart), and is compatible with Microsoft Windows (www.microsoft.com) and Linux (all flavors; www.linux.org), along with Sun Solaris (www.sun.com) and other Unix (www.unix.org) implementations.

"The [newly released] Intel-based [Xserve] will offer better performance per watt —a good choice for entry level servers."

-HELIOS Software's Helmut Tschemernjak

"Ease of setup and use is very good," says Helmut Tschemernjak, president of HELIOS Software (www.helios.de), a company that sells prepress publishing server solutions for several platforms, including Mac OS X Server. "The [newly released] Intel-based [Xserve] will offer better performance per watt—a good choice for entry level servers."

For his part, Michael Lopez, an IT manager with Reed Business Information (www.reedbusiness.com), publisher of more than 80 trade publications including Hollywood mainstay *Daily Variety*, finds the latest generation of Xserves, along with Apple's storage solution, the Xserve RAID, is enticing because "anytime anyone is starting up a new business and looking at IT needs, the first thing I point them to is Apple servers. Since they are just starting out, cost and ease of use make the most impact," Lopez says. "OS X Server software is

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Measuring IT performance in terms of cost is not simple math. You must consider other factors, too.

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■ **Altiris** released updates to the Altiris Server Management Suite that will help secure and manage heterogeneous server environments. ■ **Idealstor** released a new ejectable Idealstor 750GB hard drive for use with all Idealstor and FrankeNAS backup systems. ■ **Linksys** unveiled its iPhone family of VoIP products. ■ **Lortu Software** introduced new software components to provide deduplication, replication, WAFS optimization, and WAN optimization through Byte-level Delta Deduplication Technology. ■ **Multi-Tech** announced the CallFinder CDMA cellular gateway to let businesses use wireless networks to connect calls between cellular phones and their headquarters. ■ **Network Instruments** announced its line of Aggregator nTAPs that provide an up to 512MB buffer to reduce dropped packets on a gigabit link. ■ **Symantec** introduced new service models designed to help medium-sized and large businesses manage IT infrastructure and reduce systemwide vulnerabilities.

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☐ 10 - 99 ☐ 500 - 999
☐ 100 - 199 ☐ 1,000+

2. How often do you purchase computer hardware/software?

☐ Weekly ☐ Quarterly
☐ Bi-weekly ☐ Annually
☐ Monthly ☐ No Involvement

3. What is your annual computer hardware/ software purchasing budget?

☐ $0 - $9,999 ☐ $100,000 - $249,999
☐ $10,000 - $24,999 ☐ $250,000 - $499,999
☐ $25,000 - $49,999 ☐ $500,000 - $999,000
☐ $50,000 - $99,999 ☐ $1,000,000+

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Upcoming IT Events

- JANUARY -

Storage Visions 2007 Conference
January 6-7
Las Vegas, Nev.
www.storagevisions.com

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WCA International Symposium & Business Expo
January 16-19
San Jose, Calif.
www.wcai.com

- FEBRUARY -

Gartner Wireless & Mobile Summit
February 5-7
Dallas, Texas
www.gartner.com/2_events/conferences/ra10.jsp

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RSA Conference
February 5-9
San Francisco, Calif.
www.rsaconference.com/2007/US

• • • • •

SCALE 5x - 2007 Southern California Linux Expo
February 10-11
Los Angeles, Calif.
www.socallinuxexpo.org

- MARCH -

VoiceCon
March 5-8
Orlando, Fla.
www.voicecon.com

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Gartner Business Intelligence Summit
March 12-14
Chicago, Ill.
www.gartner.com/2_events/conferences/bi5.jsp

• • • • •

TelecomNEXT
March 18-21
Las Vegas, Nev.
www.telecom-next.com

• • • • •

Gartner Outsourcing Summit
March 19-21
Dallas, Texas
www.gartner.com/2_events/conferences/std10.jsp

• • • • •

FOSE
March 20-22
Washington, D.C.
www.fose.com

• • • • •

Data Center World
March 26-27
Las Vegas, Nev.
www.afcom.com

• • • • •

RFID World
March 27-29
Dallas, Texas
www.shorecliffcommunications.com/rfid07

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Secure IT Conference
March 27-29
Sacramento, Calif.
www.secureitconf.com

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MarketPlace NEWS

Vista Exploit For Sale

According to Trend Micro CTO Raimund Genes, software exploiting an unpatched bug in Windows Vista went up for sale on an underground hacker discussion forum last month. Although it is unknown if the code worked or was purchased for the $50,000 asking price, it would mark the first major bug reported in Vista since its release to business customers in November. In a statement released by Microsoft, the company said it is investigating the matter but has "not been contacted directly by any parties about this vulnerability report, nor are we directly involved in the forums in which vulnerabilities are reportedly traded."

Ericsson To Buy Redback

In a deal worth $2.1 billion in cash, Swedish telecommunications equipment maker Ericsson AB will buy California-based Redback Networks, a data networking equipment vendor. For each share of Redback, Ericsson will pay $25 cash, which represents an 18% premium to the company's recent $21.17 Nasdaq closing stock price. Through the acquisition, which is scheduled to close early next year, Ericsson will gain Redback's knowledge of data-routing technology, which assists service providers in delivering services over standard Internet infrastructure. Redback will keep its management team and operate as a wholly owned subsidiary of Ericsson.

Seagate Buys EVault For $185 Million

In a move intended to bolster its storage product offerings and its Seagate Services group, hard disk drive maker Seagate Technology has agreed to purchase online backup provider EVault for $185 million in cash. Once the deal is complete, which is slated to happen by the end of March, Seagate will operate EVault as a wholly owned subsidiary. It will offer data recovery services for inaccessible storage devices through both onsite and in-lab retrieval services. In addition, it will offer online backup, archiving, and recovery services specifically targeted at small to medium-sized enterprises or those with limited IT infrastructure, which Seagate views as an underserved market.

Oracle Posts Strong Q2 Financials

For its fiscal second quarter, enterprise software company Oracle reported strong revenue figures that beat analysts' forecasts by 1%. Revenue for the quarter was $4.2 billion, up from last year's $3.39 billion. Oracle's net income last year at this time was $972 million, while this year's figure rose 20% to $1.17 billion. Meanwhile, earnings per share for the quarter increased to 22 cents a share, matching analysts' expected estimates. The company forecasted growth of 19 to 21% in software revenue, and the actual figure rose 19% year over year to $3.21 billion. Oracle predicted 15 to 20% growth in new software license revenue, but it grew 14% to $1.21 billion.

RIM Q3 Profit Up

For its third quarter that ended on Dec. 2, Research In Motion surpassed analysts' expectations in net income, posting $176 million, or 93 cents a share, which showed substantial growth over last year's net income of $120 million, or 61 cents per share. RIM's revenue for the quarter was $835.1 million, up 26.8% from the previous quarter, which saw revenue of $658.5 million, and 49% higher than last year's third-quarter revenue of $560.6 million. RIM's forecasts for its fourth quarter include profits between 92 and 99 cents a share and revenue between $900 million and $940 million.

Dell CFO To Retire

Jim Schneider, who has been with Dell since 1996 and became the company's CFO in 2000, will retire next month. He will be replaced by Donald Carty, a member of Dell's board of directors and former CFO of American Airlines' parent company. Schneider was part of a period of strong growth for Dell, but the company's accounting practices are currently under investigation by the SEC. Dell also recently delayed filing its latest quarterly report as a result of the investigation. Carty will take over Jan. 2, and Schneider will remain at Dell until the end of January to help with the transition.

Citrix Buys Ardence

In a move that will help Citrix move forward in the application virtualization software market, the company will buy software streaming technology developer Ardence. Although the financial details of the deal have not been released, Citrix has said it expects the acquisition to add $15 million in revenue during its 2007 fiscal year. Florida-based Citrix will keep Ardence's approximately 100 employees, as well as its offices, which are located in Waltham, Mass. Ardence will operate as a subsidiary of Management Systems Group, which was formed by Citrix earlier this year when it purchased application performance monitoring software maker Reflectent.

Matsushita Develops "Safe" Battery

Matsushita, Panasonic's parent company, will begin mass producing what it is calling a safe lithium-ion battery. The company says it has succeeded in improving the safety of lithium-ion batteries by creating a heat-resistant layer that contains an insulating metal oxide on the surface of the electrodes. Matsushita contends the new heat-resistant layer has better insulating and heat-resistant characteristics than polyolefin, the current layer of material that insulates the battery's cathode from the anode. "Even if a short-circuit occurs, it will cease without causing the battery to overheat," says Matsushita. The company will be able to produce 5 million of the new batteries each month.

Cisco To Buy Digital Signage Company

Marking an entry into a market area with "enormous potential," Cisco announced its plans to acquire digital signage manufacturer Tivella. The company creates the Piccolo Players line of media players and the TAS Server. "This will allow Cisco to provide live video, video-on-demand, and other rich media content to desktops and digital signage displays using IP for applications such as targeted communications, advertising, and training," says Marthin DeBeer, Cisco's senior vice president of Emerging Market Technologies. Tivella has 10 employees, who will join Cisco's Emerging Market Technologies group after the deal is finalized during the first quarter.

Microsoft Wins Piracy Settlement

Microsoft has received a multimillion-dollar settlement from disc-duplication company MPO Group. MPO, which has subsidiaries in France, Ireland, and Thailand and was hired by Microsoft to replicate CDs, allegedly accepted a third party's license to distribute a certain number of copies of Microsoft Exchange and SQL Server. The third party's license did not exist, and, as a result, MPO's Thailand facility created 20,000 unauthorized copies of the Microsoft software. In a statement, Microsoft said it does not license its software to be reproduced and distributed that way. MPO is working with Microsoft to track down those responsible for distributing the pirated copies.

Network Speed Record Set

A new speed record for electrical processing of data through a fiber-optic cable has been set by Siemens AG. The company recently announced in a statement that it had processed data at 107Gbps using exclusively electrical means. The data was sent over a 100-mile-long U.S. network using a single optical fiber channel. The test was performed in cooperation with Germany's Micram Microelectronic GmbH and the Fraunhofer Institute for Telecommunications, as well as Eindhoven Technical University of the Netherlands, and represents a two and a half increase over the previous fastest transmission performance per channel.

Venture Capital Investments Remain Steady

The level of venture capital investments is forecast to remain about the same as it has been for the past two years, according to a survey the National Venture Capital Associations conducted. Of the 200 venture capitalists polled, over 90% said they plan to invest more in India and China. Likewise, energy-related firms are a hot VC market; the respondents indicated they expect to see investment in these companies soar by more than 90%. Meanwhile, those polled also projected a 70% hike in VC investments in the Internet and other media-related outlets.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	Dec. 18	Dec. 22	% change from previous week
Avaya	AV	$10.54	$13.49	$13.54	▲ 0.37%
BEA Systems	BEAS	$9.37	$13.18	$12.61	▼ 4.32%
Computer Associates	CA	$28.52	$22.52	$22.73	▲ 0.93%
Cisco Systems	CSCO	$17.31	$27.61	$26.93	▼ 2.46%
Dell	DELL	$31.25	$26.39	$25.45	▼ 3.56%
Electronic Data Systems	EDS	$24.01	$27.60	$27.27	▼ 1.2%
Google	GOOG	$429.74	$462.80	$455.58	▼ 1.56%
HP	HPQ	$28.85	$40.03	$40.63	▲ 1.5%
IBM	IBM	$82.48	$95.44	$95.25	▼ 0.2%
Intel	INTC	$25.81	$20.84	$20.08	▼ 3.65%
McAfee	MFE	$27.08	$28.43	$28.29	▼ 0.49%
Microsoft	MSFT	$26.86	$29.89	$29.64	▼ 0.84%
Oracle	ORCL	$12.28	$17.91	$17.11	▼ 4.47%
Red Hat Software	RHT	$25.73	$17.94	$22.46	▲ 25.2%
Sun Microsystems	SUNW	$4.23	$5.56	$5.46	▼ 1.8%
Symantec	SYMC	$16.79	$21.06	$20.83	▼ 1.09%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

BUYERS' GUIDE
MARKET WATCH

Network & Systems Management Appliances

Let Devices Perform Your Tasks

by Sixto Ortiz Jr.

• • •

As the use of networks in the business world has become commonplace, the complexity of modern networks has grown by leaps and bounds. Even smaller companies must wrestle with the complexities that come with infrastructures hosting a diverse ecosystem of hardware and software. Complex hardware and software provide amazing flexibility, but that flexibility comes at a price: tough management.

Luckily, there is an entire market segment of network management products providing network administrators with the tools they need to maintain their networks performing at optimal levels and successfully troubleshoot issues when they occur.

The Marketplace

According to the Yankee Group's "2005 Enterprise Network Management Survey," almost 70% of network administrators said they are required to determine the cause of network application performance problems when they occur. In that sense, Yankee Group finds, network management has evolved from a troubleshooting, "find the problem and fix it" discipline into one that requires constant network tweaking to optimize application performance.

That is because numerous business-critical applications now exist on the corporate network and depend on network performance to deliver business value. And this business value is required for enterprises large and small to recoup their investments in these applications.

SnapShot

Network Physics NetSensory Professional

Features a "try before you buy" program

A powerful monitoring and management application available on two appliances

www.Processor.com/NetSensoryPro

Case in point: According to a recent Yankee Group DecisionNote ("Network Management Vendors Target Business Services"), the network and systems management marketplace is growing at a 4 to 6% clip per year. Many network and systems management vendors are trying to deliver even greater value by focusing on the optimization of application performance.

Network Physics NetSensory Professional

Network Physics specializes in application performance management appliances designed to provide performance management, application discovery, and reporting. The company's NetSensory Professional software, included in its appliances, optimizes application response times.

The approach is to allow administrators to arrange their network data into what the company calls "Business Groups" and "Applications." According to Network Physics, Business Groups are sets of IP addresses, and Applications are composed of ports, IP addresses, and/or URLs. The idea is to map network data onto business entities so administrators can quickly see where the most critical problems are occurring.

Other features include recording and storage of more than 50 network metrics, including response time, utilization, and congestion. The NetSensory Insights action guides are designed to let administrators, via a point-and-click interface, perform common practices such as auditing, developing a baseline, troubleshooting, and optimizing. The company manufactures and markets two NetSensory appliances, the NP-2000 and the NP-3000.

Candela Technologies LANforge

The LANforge FIRE and ICE appliances, manufactured and marketed by Candela Technologies, are designed to provide network administrators with simulation and testing tools that let administrators test network performance without breaking the bank.

For example, Candela's LANforge FIRE Network Traffic Generator appliance supports a wide variety of protocols—including Ethernet and wireless at Layer 2; accelerated UDP/IP and TCP/IP at Layer 3; and FTP, HTTP, and others at Layer 4—and can emulate up to 250 networked devices per LANforge appliance. Candela also manufactures and markets its LANforge WiFIRE 802.11a/b/g Traffic Generator, designed to test wireless networks by emulating up to 31 802.11a/b/g wireless clients.

If you need to simulate network impairment at the WAN level, the company's LANforge ICE WAN Simulator may meet your needs. With this appliance, administrators can perform WAN testing without having to invest in WAN hardware. Features include a small, portable form factor (laptop or network appliance) that allows for portability, ability to automate testing with scripting, and support for emulation of a variety of WAN speeds, from 10Mbps to 1Gbps.

SnapShot

Candela Technologies LANforge FIRE & LANforge ICE

LANforge ICE CT900 (laptop): $4,650
CT920 (appliance): $4,650

Network testing and emulation products provide testing flexibility

www.Processor.com/Candela1

SnapShot

Infoblox Network Identity Appliances (Infoblox-1050 model shown)

Appliance-based provision of network identity services

www.Processor.com/NIA1050

Infoblox Network Identity Appliances

Infoblox says it provides businesses large and small with the ability to deploy a variety of network identity services, such as DNS and DHCP, using appliances instead of traditional approaches that employ software installed on servers. Infoblox's approach, the company claims, is better due to the inherent reliability of purpose-built appliances designed to do one thing (or a few things) very well.

The Infoblox line of Network Identity Appliances includes the Infoblox-550, -1050, -1550, and -1552 devices. All appliances run the company's DNSone package, which provides DNS (naming services), DHCP (addressing services), IPAM (IP address management), RADIUS (authentication, authorization, and accounting), TFTP (file delivery), and NTP (time synchronization) services.

The appliances themselves vary in capabilities: The Infoblox-550 is designed for small enterprises and branch offices and can support a capacity of 25,000 database objects, 12,000 DNS requests per second, and 75 DHCP leases per second. In contrast, the Infoblox-1550 and -1552 appliances are built for medium-sized and large enterprises that need to support 36,000 DNS queries per second, up to 225 DHCP leases per second, and a capacity of 400,000 database objects.

SnapShot

Netreo OmniCenter

Numerous network management options in one box

www.netreo.net

Netreo OmniCenter

Netreo is a provider of network and security management products that provide fault, performance, service-level agreement, device/configuration, and security management. Netreo uses an appliance-based approach to provide these management tools using the company's OmniCenter appliance.

For starters, the device uses a variety of standardized approaches to network monitoring, including ping, Telnet, SSH, WMI, and SNMP. In terms of fault management, OmniCenter features root-cause analyses and numerous service checks, such as CPU fan failure alarms and Web defacement alerts, for example.

Performance management options feature reports covering a variety of variables, including bandwidth, CPU, memory, latency, jitter, uptime, dropped packets, and others. Also, alerting features include customization of thresholds that generate alarms, automatic sending of notifications to other personnel if the primary receivers of alarms do not acknowledge receipt, and a Windows Management Interface that allows for services on Windows servers to be automatically restarted based on preset thresholds.

Other features include a Network Change and Configuration Management module (for automatically detecting device configuration changes), Tactical Overview pages for quickly seeing the possible business impact of network device failures, and a Web-based management and administration interface that doesn't rely on Java and works on a wide variety of browsers.

Allot Communications

Allot Communications is a provider of broadband traffic management products, namely the company's line of NetEnforcer appliances. The NetEnforcer product line ranges from entry-level models designed for small to medium-sized enterprises (NetEnforcer AC-400) to broadband service providers (NetEnforcer AC-2500).

The NetEnforcer AC-400 supports various network topologies and features a wide range of network operation speeds, from 2 to 100Mbps. The device uses deep packet inspection technology to monitor network traffic, identify the applications causing it, and use QoS to provide policy enforcement. For example, the AC-400 can detect a number of protocols, including P2P, VoIP (such as Skype), gaming, IM, and chat.

Other features include WAN optimization, alarms for warning about significant network events, isolation of suspected malicious traffic, and use of signature and behavioral recognition techniques.

SnapShot

Allot Communications NetEnforcer (AC-404 model shown)

Network traffic analysis to enable detection of abnormal trends and policy enforcement

www.allot.com

So Many Choices

From traffic control to application performance management to network monitoring, network management appliances perform a wide variety of functions. The tremendous complexity of modern networks and the wide variety of applications and devices that coexist within them make the use of network management tools a requirement for network administrators tasked with ensuring their network environments operate smoothly and efficiently.

Buying Tips

Here are ideas for what to look for in network management appliances.

Compatibility. Be sure whatever network appliance you choose uses standardized protocols that will work well with any networking infrastructure.

Reporting capabilities. Network management tools need to come with a complete array of reporting tools that make it easy for administrators to quickly see the status of their networks.

Alerting features. Network management appliances should provide automated alerts whenever certain management thresholds are exceeded.

Scalability. Choose network management options that will grow with your network.

To see *Processor* Showcase ads for products in this category, look online at www.Processor.com and find the Network & Systems Management ads under Communications/ Network & Systems Management.

Introducing Room *Alert*™ 26W...

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- Monitors Main Power & includes a built-in Uninterruptible Power Supply (UPS).
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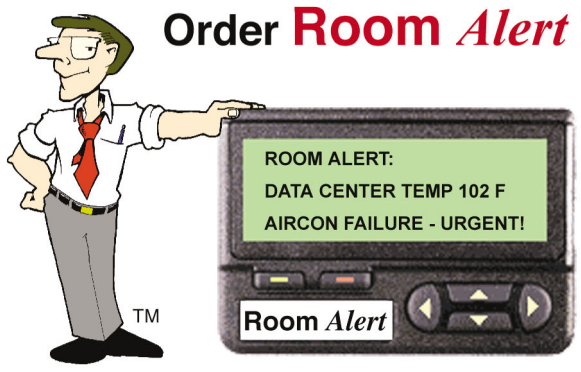

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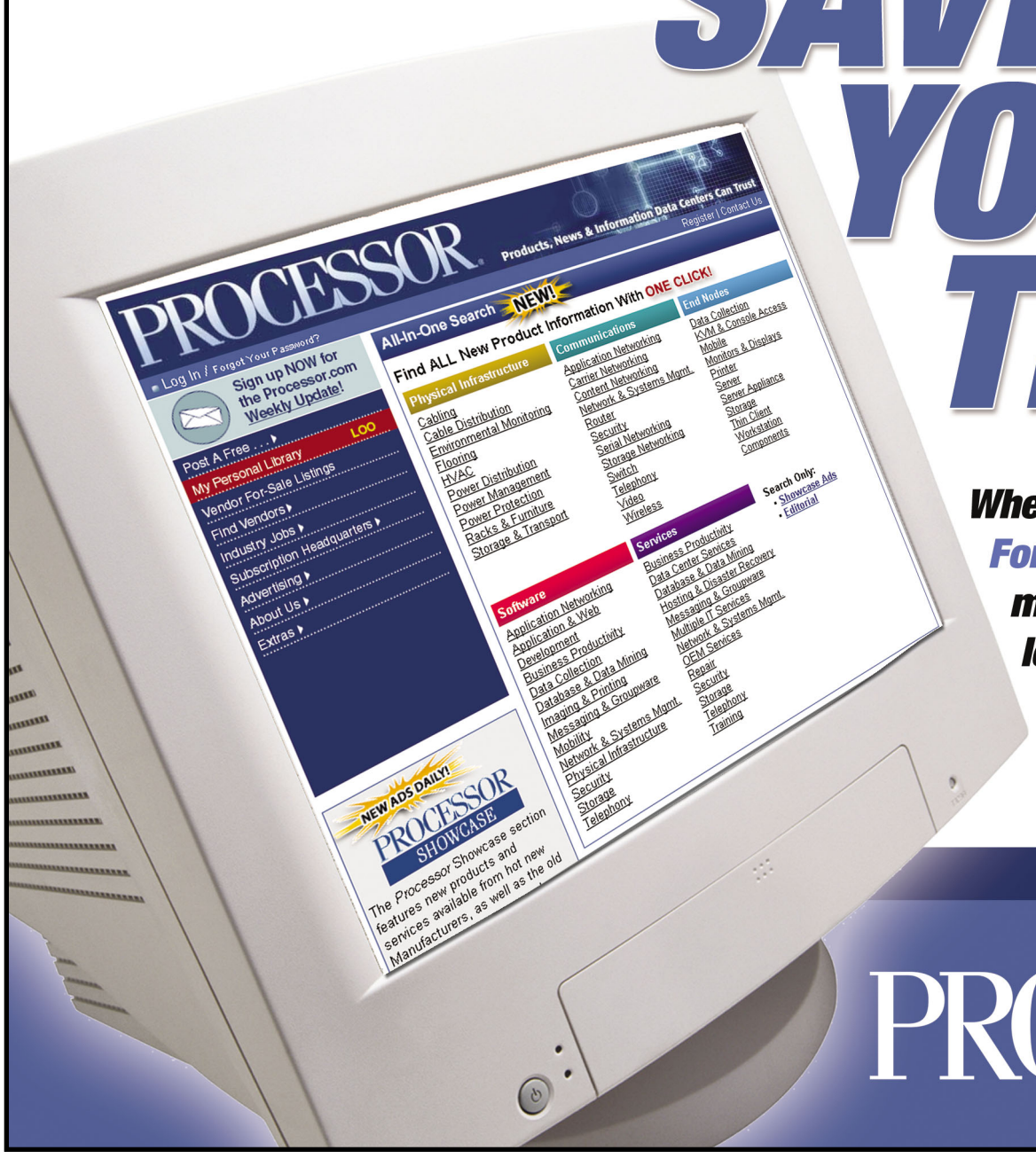

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What's Ahead For Security

What Trends Will 2007 Bring?

by Chris Jackson

• • •

In 2007, the convergence of networking, security, and identity management technology will be a trend to note. For the small to medium-sized enterprise, it will become increasingly important to not only know what is happening on the network and when, but to also know who the responsible party is. As more regulations are being pushed onto organizations of all sizes, it is becoming increasingly important to manage networks and provide strong security. SMEs with limited budgets and resources are getting squeezed as mandates are demanding more accountability and better record keeping of who is accessing what and when.

5 Key Things To Prepare For

- **Electronic discovery.** Legal proceedings will require digital copies of corporate correspondence.
- **Identity management.** Controlling user access is not enough; now small to medium-sized enterprises will need fine-tuned monitoring that provides a granular insight into user activities.
- **Microsoft Vista.** Whether it's rolled out by the SME or used by employees connecting via VPN, Vista will require IT departments to upgrade their skill sets to support the new OS.
- **End-user encryption.** Full disk encryption (like Seagate [www.seagate.com] offers with its DriveTrust technology) will enable SMEs to encrypt data on notebooks that are vulnerable to theft or compromise. Key management and user training in this technology will impose a substantial burden on IT departments that don't stay abreast of this technology.
- **Vendor consolidation.** The IPS/IDS industry is experiencing tremendous consolidation pressures that will reduce the number of players to a handful. Make sure that your SME has a migration plan if your current vendor EOLs (end-of-lifes) your systems earlier than you expected.

More Regulations

Sarbanes-Oxley and HIPAA garnered a lot of attention in past years but really did not affect SMEs. Just recently, the United States amended the Federal Rules of Civil Procedure to pass laws to enforce stricter tracking and retention of digital information that affects companies of all sizes. As of Dec. 1, all companies must produce electronically stored information as evidence in civil court cases to facilitate faster processing. For the purposes of compliance, reporting, forensics, and network health, companies will seek cost-effective security tools that provide deeper visibility into user activity within the network—or risk the consequences of noncompliance.

But what does all of this mean for the SME? Integrating identity management and instant user identity resolution for security and network issues has not been easy. With heterogeneous network and security environments supporting dozens to hundreds of corporate applications and multiple directory services and authentication databases, identity management has become a large and overwhelming task for many SMEs as well as larger corporations.

Trying to track and control user activity and access rights spread out over a broad multivendor environment that was not designed to work together is nearly impossible to do with native tools. And trying to correlate user activity, security alerts, network events, and application logs to produce centralized reports and audit trails for compliance reporting and record keeping have been time-consuming manual tasks that have increased costs significantly for organizations large and small.

Appliances To The Rescue

To help solve these pain points, several vendors supply affordable plug-and-play appliances that integrate networking, security, and identity management features. The goal of these vendors is capitalizing on the needs of SMEs with limited budgets and constrained staffs. Among the leaders in this category are A10 Networks (a10networks.com), Identity Engines (www.idengines.com), and Infoblox (www.infoblox.com).

According to Phil Kwan, A10 Networks' director of product marketing, "The IDsentrie network identity management appliance provides instant user identity resolution for any IP or MAC address to immediately track which users are responsible for network activity (IP-to-ID Service)."

IDsentrie was designed with the SME in mind. It can be deployed in a few hours without a team of expensive consultants, and its vendor-neutral approach provides identity resolution services to any third-party security, network, or application monitoring system and event logs to help alleviate the pain points immediately. Other IDsentrie features that help SMEs lock down their network and security access include user account provisioning, self-help services, and authentication and access control.

Competing with A10 Networks in the integrated appliance field is Identity Engines' Ignition Server (www.identityengines.com). The Ignition Server is a network access control appliance that integrates with LDAP (Lightweight Directory Access Protocol) systems, Microsoft Active Directory, and RSA's Authentication Server. Using a centralized NAC appliance for controlling VPN access reduces the workload on shorthanded IT staffs. With fine-grained permission controls, the Ignition Server helps provide secure access to your VPN customers.

Not to be outdone, security pioneer Infoblox (www.infoblox.com) offers an integrated Network Services for Authentication suite that leverages the security and stability of its hardened Infoblox appliance. The result is user authentication across VPN systems and wireless access controls, all integrated with either a standalone Infoblox directory database or with Microsoft's Active Directory.

New Security Options

The need to better integrate identity management and identity visibility into network and security functions has gained attention, and customers and analysts are searching for more intelligent and intuitive ways to manage the network. Dedicated identity management appliances will provide the SME with affordable systems to gain control and insight into their networks in 2007 and beyond.

The Biggest Impact

For many years, small to midsized enterprises have often been able to survive with an IT system that lacked true accountability—user actions were rarely monitored, and Web surfing and email activity were largely unregulated. Corporate accountability has finally created a "perfect storm" where any action (or inaction) on the part of user monitoring can be dangerous to the health of an SME. With corporate discovery finally coming to grips with the challenges posed by IT systems, the SME can no longer feign indifference when it comes to knowing what its employees are doing. For many SMEs, 2007 will be the year when many IT departments are forced into a role of Big Brother.

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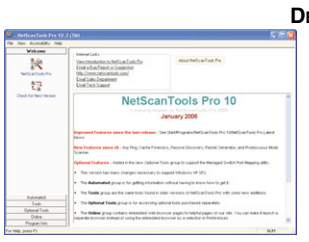

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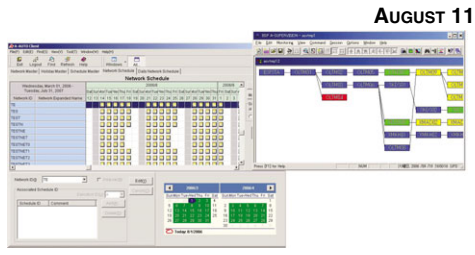

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2007 Trends In Storage

SMEs Must Manage Storage Infrastructure To Reap Benefits

by Ericka Chickowski

• • •

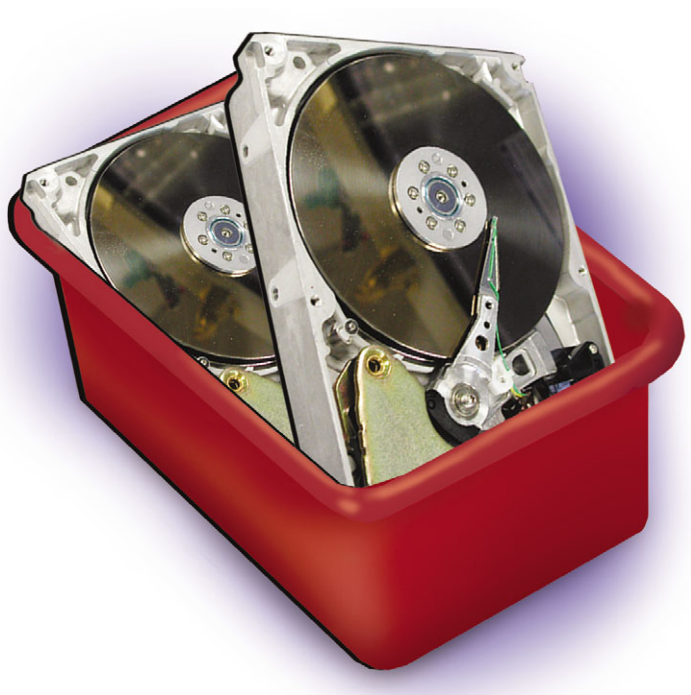
As the cost of storage hardware continues to slowly decline, enterprises small and large are bulking up their storage capacities at a fevered clip, from between 30 to 50% annually, according to Forrester Research. As small to midsized enterprises continue to increase their storage capacity, they will be facing unique challenges in 2007.

Take Advantage Of New Tools

In the enterprise storage market, there has traditionally been a class system of haves and have-nots—those who could get reliable enterprise storage products at an attainable price point for their organization size and those who could not. "Historically, the SMEs have been the have-nots because they haven't had the capital investment or the staffing required to run these big storage infrastructures," says Brian Reagan, executive vice president and chief marketing officer of Arsenal Digital Solutions (www.arsenaldigital.com).

Even as storage prices started to plummet several years ago, SMEs were not being serviced properly by storage vendors that still may not have been putting as much effort into their midmarket products as their higher-end storage products, he says. However, that has changed as SMEs continued to clamor for the same functionality and reliability as their larger competitors. Additionally, they were asking for easier manageability and scalability to suit their size.

"Now we're seeing that whether it is because of new service offerings or different price points, the vendors are trying to attack," Reagan says. "I think you're seeing the demand side really force the suppliers to adapt to their needs."



Slow But Steady Growth

The heart of this underlying shift by both large and small vendors comes down to the SME's need for more manageable storage products. Because of the rapid growth and increased storage density within even the smallest organization, the need for a more reliable storage infrastructure has become tantamount.

The problem is that most of these organizations just don't have the resources to run the typical network storage system. But the need for such an environment still remains, Reagan says.

"The infrastructure is the last thing they want to be spending dedicated time on, but unfortunately they have to because whether it is requirements of data retention or whether it is the fact that the integration across these applications and servers and storage layers is becoming so tightly coupled, they don't have the choice but to focus on it," says Reagan. Something has to give, and in this case it has been the market—both in the case of easier-to-use products and in a new surge of services to handle complex network storage management, he says.

In spite of the huge storage service provider flameout of the late 1990s, some analysts do believe that we'll see another resurgence to respond to the increased complexity in the market.

"Most IT departments are struggling to acquire, manage, and protect massive storage infrastructures while responding to new business demands," Stephanie Balaouras of Forrester wrote recently. "Therefore, they are once again considering outsourced storage as an alternative. Outsourcing storage can relieve the pressures burdening IT departments, but firms must identify the undifferentiated storage tasks suitable for outsourcing and develop criteria for selecting a service provider."

On the product side, the response has largely been to offer network storage on a more accessible format: IP-based products. Doing so helps smaller organizations, who traditionally depend on small IT staff filled with generalists and can't afford to hire a specialty storage team, Robert Gray said in a recent IDC report.

One solution that Reagan says customers have been particularly pleased with is EMC's CLARiiON AX line (www.emc.com). But organizations needn't rely on the big vendors for IP-based storage solutions. Other smaller vendors are also taking advantage of iSCSI to simplify the

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Storage Stats

IDC found in a recent survey on storage management challenges that 36.3% of mid-market companies rank "improving data availability and recovery" as their top priority. Coming in second with 23.5% was "managing more storage without increasing management staff."

Businesses are increasing their storage capacity by 30 to 50% annually, according to Forrester Research.

EMC leads the external controller-based disk storage market with a little over 25% market share, according to a recent Gartner report.

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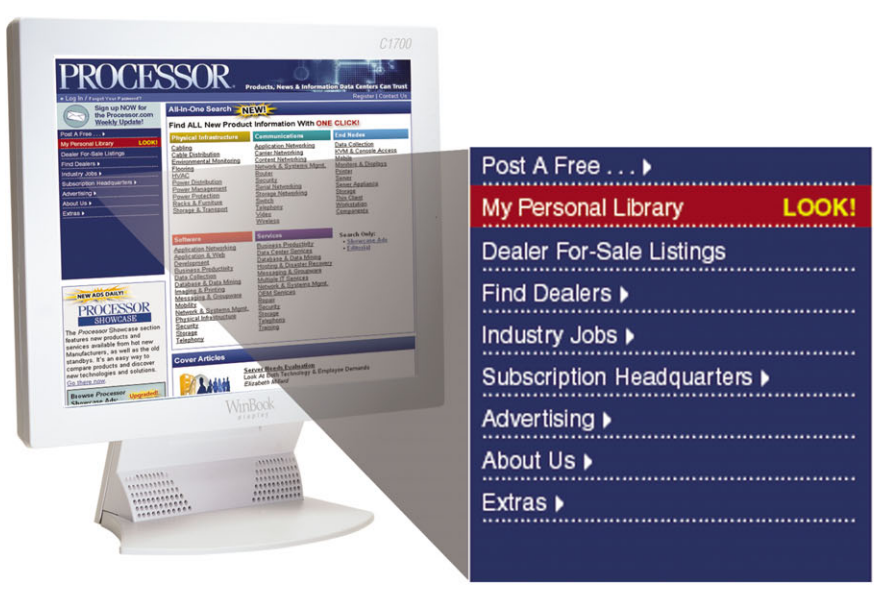

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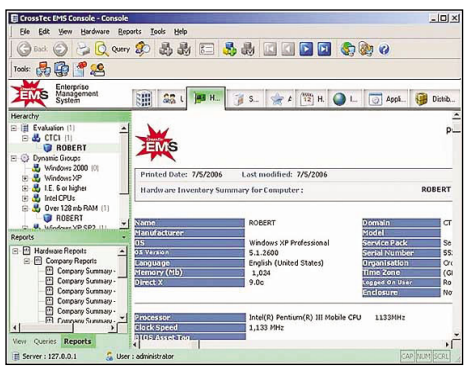

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A Look Ahead For Servers & Systems

Analysts Peg Virtualization As The Top Trend

by Sandra Kay Miller

• • •

ANALYSTS DON'T NEED a crystal ball to predict the emerging trends related to servers and systems for the upcoming year.

Topping their list is virtualization. According to Jonathan Eunice, founder and principal IT advisor of research group Illuminata, "2007 is the year that virtual servers go beyond 'early adopter' or even today's 'early majority' phase to become fully mainstream, fully Main Street technologies."

Driving the push for virtualization is cost reduction through server consolidation, dynamic provisioning, and disaster recovery. "IT managers are being swamped with servers and looking for means to drain the swamp," says John Enck, vice president and research director at Gartner.

While virtualization may help stem the growing number of physical servers in the data center, IT managers continue to be faced with mounting power and cooling requirements. Kris Singh, director of strategic platform technology programs at AMD (www.amd.com), warns that power consumption is rapidly becoming a global issue. And Eunice points to exponential technology growth in the developing economies of Brazil, Russia, India, and China, as well as other lesser regions.

IBM (www.ibm.com), AMD, HP (www.hp.com), Dell (www.dell.com), and Sun (www.sun.com) have teamed up to help form The Green Grid, a consortium of IT organizations seeking to share best practices to lower the overall consumption of power in data centers. The "greening" of the server and system industry has become a priority. Data centers will begin to see vendors actively touting more "energy-smart" products.

New Releases

In 2007, quad-core x86 servers will offer a significant gain in performance as well as complexity. Enck believes data centers will, at first, be challenged to maximize the use of these more powerful servers due to this complexity.

Eunice looks for the new year to offer a great update cycle. As new multicore (both dual- and quad-core) x86 arrive in volume from both AMD and Intel (www.intel.com), there are going to be opportunities for more computing power at very reasonable prices. Combine this with virtualization, which all of the multicore processors have hardware support for, and it's an appealing mix.

The multicore opportunity extends beyond x86, however. The latest versions of IBM's POWER, Intel's Itanium, and Sun's UltraSPARC T1 are all impressive multicore designs, too.

In the virtual realm, look for products based on the IBM Xen hypervisor to gain more maturity and more traction against market leader VMware (owned by EMC; www.emc.com), which currently holds 55% of the market. Microsoft (www.microsoft.com), SWsoft (www.swsoft.com), BEA Systems (www.bea.com), and Linux (www.linux.org) will also chip away at VMware's stronghold.

Microsoft is expected to finally make it out of the chute in the second half of the year with its long overdue Longhorn release of Windows Server. Despite having similar features to Vista, Enck says IT managers should spend time testing and planning for deployment of this new version.

Challenges

Analysts predict several factors to catch IT managers off guard in the coming year. Rob Enderle, president and principal analyst of the Enderle Group, observes virus attacks are changing and becoming increasingly criminal in nature. He suggests examining exposed systems. "Servers may need to be upgraded, both software and hardware, to more effectively run both countermeasures and to make sure the critical platforms are as resistant as possible to these attacks, particularly if the servers are exposed."

With the rise in multicore processors and virtualization, Enck foresees issues relating to licensing forming on both fronts. With respect to dual- and quad-core processors, many application software licenses are tied to the processor core and not the processor socket. Thus simply moving an application from a two-way, single-core system to a two-way, dual-core system could increase the license cost of the application software running on the server.

On the virtualization side, most application software licenses are tied to the physical processor cores in the machine, not the virtual processor cores used in the virtual machine. "Thus if I implement a virtual two-way operating system in a four-way server, I may be responsible for paying for a four-way server license," Enck says.

Enck advises IT managers to read the fine print in their license agreements and support agreements. "We are seeing some application vendors refusing to support their products if they are running in a virtual machine," he says.

While data center managers are caught up in emerging virtualization and multicore processors, Eunice cautions not to ignore I/O and storage requirements. "Much of the world focuses so much on the 'processing' that it forgets that the full job is 'data

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Five Key Things To Prepare For

- More power and cooling requirements
- More aggressive attacks with viruses, Trojans, worms, phishing, spam, and spyware.
- Licensing challenges with multicore and virtualized systems
- Growth of blade workstations
- Microsoft Windows Vista

Stats & Facts

IDC estimates at least 75% of companies with 500 or more employees currently deploy virtual servers, and 45% of all new servers purchased this year will be virtualized.

The InfoPro's survey of Fortune 500 and 1000 companies found that 85% of respondents cited virtualization technology as critical.

IDC found Linux is the fastest-growing platform for virtual machine deployments, accounting for 40% of the dollars spent on virtual machine software last year. Windows followed with 28%, and the remainder went to Unix and mainframe environments.

Gartner predicts in 2007 that power and cooling spending will exceed server spending.

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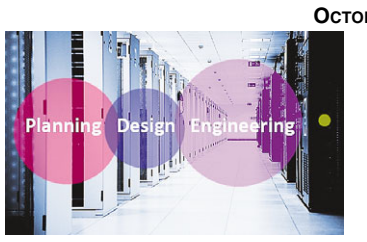

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The Wireless Road Ahead

Continued from Page 1

market for next year are increasing focus on manageability, heterogeneity, and complexity and increasing concerns about scalability.

Murphy says two years ago security was the No. 1 concern for enterprises. But today many are equally or more concerned about manageability. He notes, "Enterprises find that it is possible to define a strong security policy but difficult to implement and enforce those policies uniformly. Without management, a wireless network simply cannot be secure."

In terms of heterogeneity and complexity, Murphy says enterprises installing wireless networks typically need the hardware to last three years or more. He says, "This means that more and more enterprises today are operating multigeneration wireless LANs consisting of older legacy equipment and newer, state-of-the-art devices. Enterprises are increasingly interested in solutions that give them the flexibility to manage and control all different kinds of hardware from the same console."

As for scalability, Murphy says while only a handful of networks had 1,000 or more wireless access points a few years ago, that is a moderate-sized WLAN today. He says it is not uncommon for networks to expand to 10,000-plus access points. He notes, "As wireless networks grow to include thousands of nodes and users, IT needs a single console where they can see what is happening and control the entire network."

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Big Plans

So what are the industry's plans for 2007? For starters, Moore says ubiquity will be important. He says, "In 2007, the wireless industry will take another step in validating technology and business models aimed at bringing ubiquitous wireless broadband to the masses. While the result will likely not be realized in 2007, what's big in 2007 is the planting of the seeds that will lead to that ubiquity."

"As wireless networks grow to include thousands of nodes and users, IT needs a single console where they can see what is happening and control the entire network."

-AirWave Wireless' Greg Murphy

In addition, Moore says we can expect to see the hotspot transforming from venue-based to venue-less citywide mesh-Wi-Fi deployments. Similarly, he says, mobile WiMAX cards will commercially ship in 2007, while operators are already planning to deploy metropolitan networks based on the new standard. "At the same time," he notes, "we'll see the continuing performance enhancements of 3G networks with CDMA [Code Division Multiple Access] operators launching EVDO [Evolution Data Optimized] Rev A and GSM [Global System for Mobile Communications] operators launching HSDPA."

Murphy says according to AirWave, many plans for 2007 surround the integration of new wireless networking technologies such as WiMAX, mesh networks, and other proprietary technologies into the current wireless networking mix. He says, "With the recent emergence of these technologies, enterprises will apply the different solutions based on their needs—indoor networks, outdoor networks, network capacity, diversity of user groups, etc. Along with this multiarchitecture approach will come a new wave of challenges in securing and managing them from an IT standpoint; therefore, much of the advances will be focused on tying everything together."

Moore says WiMAX is shaking up the wireless broadband market. He says, "While data is the primary driver behind most deployments, incremental services via converged WiMAX devices seem inevitable. This will lead to increased competition, expedited service availability, and a multitude of connectivity options and likely declining prices."

Murphy says as wireless networks get larger and more mature, managing these networks to deliver secure, reliable performance is becoming more difficult for typical enterprise IT staffs with limited expertise. For example, Murphy says, "AirWave Wireless survey data shows that while roughly 20% of organizations are using multiple different wireless network architectures today, the percentage will double to 40% in the next two years."

Offerings

Daniel Carpini, marketing director for xG Technology (www.xgtechnology.com), says, "Other viable and available alternatives to WiMAX in wireless broadband technologies will appear on the market in 2007. We can also expect to see increased offerings in commercial wireless telephony using unlicensed spectrum." He says xG's tri-mode xMax phone will be able to operate wirelessly throughout large geographic areas, at any Wi-Fi hotspot (when activated, the phone itself becomes a broadband Wi-Fi hotspot), or through an Ethernet connection to a computer connected to the Internet. "This will be the first mobile VoIP phone on the market," says Carpini.

In February, Murphy says, AirWave will be releasing Version 5 of its AirWave Management Platform, which will add mesh and WiMAX network capabilities and offer several new features. AirWave develops network management software solutions that enable the entire IT staff to monitor, configure, and control their wireless networks from a single centralized console, whether the network has 25 wireless access points or 25,000.

Where will the industry be a year from now? Moore says, "Full of new entrants and new technologies resulting in increased choices and management overhead for enterprises, their users, and the IT organizations that support them." Murphy adds, "Network users will request their hardware infrastructure vendors to partner their solutions with vendor-neutral software providers that will allow users to integrate LAN technologies with their wireless networks and allow them to integrate their legacy systems and other solution provider networks."

The Biggest Impact

According to Michael Moore, senior director of business development at iPass (www.ipass.com), 3G technology will have a big impact on the wireless and mobility space in the coming year.

Moore says, "2007 is shaping up to be the year 3G takes hold in the enterprise. With recent performance, coverage, and cost improvements to 3G networks, enterprises are starting to see it as an important weapon to add to the remote access arsenal. Their challenge is how to integrate 3G into their end-user experience, remote access management, security management, and procurement models, doing so on a global basis in the face of multiple technology standards and providers. . . . And they cannot turn their back on 3G; otherwise, users may acquire these services on their own, paying too much for service and hiding the costs on departmental expense reports."

Five Key Things To Prepare For

Daniel Carpini, marketing director for xG Technology (www.xgtechnology.com), gives five things we should be preparing for now.

- Lower costs for wireless service
- Flat-rate mobile VoIP
- Flat-rate mobile international calling
- Wireless telephony over unlicensed spectrum
- Mobile data rates of 10Mbps-plus

2007 Trends In Storage

Continued from Page 9

architecture. Some examples include StoneFly (www.stonefly.com), a wholly owned subsidiary of DNF Storage, and Nexsan Technologies (www.nexsan.com).

StoneFly recently added more functionality to its ValueSAN line of IP SANs, which scale horizontally and vertically to offer lower-cost or higher-performance expansion options. Single-array ValueSAN configurations range up to 12TB, and the IP SAN is available with RAID 6 and in single- and dual-concentrator configurations to improve continuity. The options are relatively low-cost, starting at $20,000 for a 4TB configuration.

Nexsan recently partnered with RELDATA (www.reldata.com) to create a new unified IP SAN/NAS system that combines Nexsan's SATABoy disk storage system with RELDATA's open storage virtualization gateway. SATABoy's RAID controllers offer 370MBps per controller, enabled by dual 2GB Fibre Channel connectors per controller.

Overall, IDC's Gray says he believes the market will see more products such as these hit the market next year and beyond. IDC predicts that by 2009 the iSCSI segment will make up 30% of the SAN market.

Biggest Impact: Storage Security

One of the biggest impact niches in storage this year may be in data protection. As organizations are held more responsible by data breach disclosure rules, more are turning to data security products to minimize the risk of breaches and the impact in the event of a breach. One of the key ways some storage vendors are helping small to mid-sized enterprises respond to the risks is through offering whole disk encryption solutions for the road warriors. Seagate (www.seagate.com) recently released the first laptop drives with built-in whole disk encryption, and analysts expect similar releases from competitors in the near future.

Managing Storage More Efficiently

Another key aspect that SMEs will likely be forced to tackle next year is the idea of the information security life cycle. As the storage environment grows denser and more complex, organizations must find ways to manage and secure their data on a holistic level.

"Enterprises continue to focus on individual point products to solve storage challenges," says Andrew Reichman of Forrester. "As storage budgets skyrocket, enterprises need to take a more holistic approach to their storage environment by developing a comprehensive storage strategy and shifting their focus to storage processes and management tools—not just technology."

"From a trend standpoint, we're seeing this confluence of what used to be these separate domains of disaster recovery and backup and security and archiving; they're all kind of mushing together," Reagan says. "And the conversation is much more today about the service levels."

Analysts with the Clipper Group agree. "Data and tiered infrastructure are part of an arch supporting the business," a recent Clipper Group report noted. "The keystone of the arch is service levels because they are the connection and common ground between data and tiered infrastructure. Service levels represent the consumer- or demand-side view."

These service levels are defined by specific metrics of performance, availability, recoverability, security, and so on, the analyst firm explains. The data should be classified and mapped to service levels based on application, user, and business requirements and deployed in a tiered infrastructure that matches those requirements.

By creating a plan such as this and deploying storage in a tiered environment, data center managers and users can better match data availability and reliability to the business' needs.

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Apple & The Enterprise

Continued from Page 1

extremely stable, doesn't require additional licensing fees for client connectivity, doesn't suffer from the security concerns Windows servers deal with, and the administrative tools are easy to use and make it simple to get the server up and running quickly."

Despite his enthusiasm for the Xserve and Xserve RAID, Lopez, a self-professed Mac head, does not see his company using Apple enterprise hardware or software, even for a refresh. "Since our company infrastructure has traditionally been Windows-based, most of our servers and tools are heavily entrenched in that world," he says. "Moving over to a completely new platform would require significant investment, testing, and cost. It would also [require additional] training, as troubleshooting on OS X would be a new skill set."

New Kid On The Block

Ken Vitto, director of marketing at rack-enclosure manufacturer GizMac (www.gizmac.com), believes that Apple's primary challenge stems from it being the new kid on the block, at least on the enterprise front. "The Intel-based Xserve just started shipping [last fall], and history-wise, [Apple] hasn't had much time with servers compared to the big boys, so [IT people] don't perceive that [the company] has a lot of knowledge," Vitto says.

Moreover, the Xserve RAID, despite its price-point, compatibility with different operating systems, and Java-based administrative tools, has yet to be re-engineered since its introduction back in 2004, and so unlike the new Xserve, the Xserve RAID does not offer either SATA or SCSI configurations. "I expect that once Apple releases its new RAID system, [it] will be better than everyone else's, but right now you have a new top-of-the-line server with an old RAID, and Apple needs to have an updated RAID to be taken seriously," says Vitto—although he adds that he will not be surprised if Apple announces a newly configured Xserve RAID at January's Macworld convention.

HELIOS president Tschemernjak says that it is too soon to predict how his customers will respond to the new Intel-based iteration of the Xserve, given its recent release. "In general, though, our customers are not particularly concerned about the processor. They look at results," Tschemernjak says.

Money Changes Everything

Alex Grossman, senior director of server and storage hardware product marketing at Apple, says that the new Xserve's value proposition goes beyond its adoption of Intel's Xeon chip. For example, the two PCI Express slots can hold 9-inch-long legacy cards so that IT departments don't need to replace expensive InfiniBand or Gigabit Ethernet cards that they have already invested anywhere from $500 to $2,000 or more on.

More intriguing, perhaps, the new Xserve offers efficient cooling strategies, including lots of space inside the box for better airflow and what Grossman calls "granular fan management," a real selling point in increasingly crowded and hot server rooms. Each Xserve comes with seven dual-blade fans that look for hot spots, including dedicated fans for its FB-DIMM memory slots. In addition, the Xserve has 100 thermal-management sensors operated within the firmware that provides users with thousands of steps between low and high. "We can offer 100% performance at 35 degrees Celsius, which is typically not done at the 1U or 2U level," Grossman says.

These capabilities, along with others, illustrate Apple's greatest advantage in the server space—and why, despite all its challenges, Apple may well become a major player in the enterprise space. Apple has a lot of money it can invest into research and development.

"Apple is cash-rich with iPod sales, and [it is] investing like crazy on the enterprise side," says Vitto. "Its delay into Intel allowed [the company] to learn from others' mistakes and subsequently build a better mousetrap."

Vitto thinks Apple has already made Xserve into a top-of-the-line server with a great price point—although he predicts Apple will add one thing to the new server that will make it truly drool-worthy.

"If Apple drops in Intel's new quad-core Xeon chips into the Xserve, that means [the Xserve] would have the equivalent of eight chips," says Vitto. "That would offer amazing power in a 1U server."

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Apple Enterprise Offerings

Product	Components/Features	Pricing
Xserve 1U Rack Server	Two 64-bit dual-core Intel Xeon processors (choice of two 2GHz, 2.66GHz, or 3GHz); three hot-swap hard drive bays, each of which can be configured separately; two RJ-45 Gigabit Ethernet interfaces on main logic board; two PCI Express slots; two FireWire 800 ports; one FireWire 400 port; two USB 2.0 ports, and one DB-9 serial port; Unix-based Mac OS X server OS with unlimited client license	Pricing starts at $2,999; 30-day trial period on all configurations
Xserve RAID 3U Storage System	Can hold from 1TB of Ultra ATA storage on four drive bays to 7TB of Ultra ATA storage on 14 drive bays, depending on configuration; supports RAID levels 0, 1, 3, 5, and 0+1; standalone support for Windows Server 2000 and 2003, all flavors of Linux, Sun Solaris, and Novell NetWare; Fibre Channel PCI Express or PCI-X card available	Pricing starts at $5,999
Mac OS X Server v10.4	Unix-based OS that offers 64-bit application support; uses open standards, including Apache, Kerberos, OpenLDAP, Postfix, Samba, and SpamAssassin; works with Windows and Linux clients, as well as Mac and other Unix clients; Open Directory standards-based directory services architecture works even with proprietary servers such as Microsoft ActiveDirectory	Unlimited client license included with Xserve; standalone version with unlimited client license costs $999
Xsan 64-bit SAN file system	Works with Mac OS X Server v10.4 to provide users the capability to access files and volumes of up to 2 petabytes; simultaneous read/write capabilities; pools data across multiple RAID devices; connects users directly to high-speed Fibre Channel Network; high-availability features, including Fibre Channel multipathing, file system journaling, metadata controller failover, and bandwidth reservation; able to share files with Linux, Unix, and Windows systems	$999 per node

A Look Ahead For Servers & Systems

Continued from Page 10

processing' and that you can't do that adequately unless you can move the data into and out of the central processing complex just as fast as you can chomp those bits," he says.

Fast Forward

Looking past 2007, expect to see server and system vendors moving toward standardized frameworks in virtualization. Analysts envision that virtual machine interfaces will move from the current vendor-specific model to a standardized topology allowing customers to dynamically switch between multiple vendors, further streamlining data center consolidation, especially during mergers and acquisitions.

Enderle has noticed Microsoft's more aggressive approach to security issues. "For instance, for the latest patch release, none of the exposures they corrected applied to Vista or the next generation of Windows Vista," he says.

On the hardware side, Enderle sees major OEMs looking past the PC. "I expect that a year from now we will have an increasing number of solutions as PC blades, workstation blades, and bladed servers become more viable."

Biggest Impact

Virtualization is the center of the crater, but moving out from there, Enck expects to see more products focused on orchestration of the data center. This includes the ability to move OS instances and application instances from server to server based on manual administration decisions or rudimentary policies. Orchestration will allow IT managers to run their data centers more efficiently.

Eunice agrees. "The biggest shift is toward pervasive virtualization," he says. VMware is rapidly becoming a popular way to run x86 applications. With multiple competitors bringing Xen-based alternatives to market, competition is going to further popularize virtual servers as the preferred deployment model. Competition will reduce the costs for virtualized servers. Beyond x86, exciting things are happening in virtualization with Solaris 10, on POWER and AIX, on Itanium and HP-UX, and in IBM mainframes.

Eunice says, "The way that applications and data centers are managed will change as much or more over the next year to three years than it has over the past 20. In short, virtualization is hopping!"

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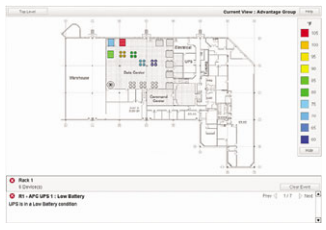

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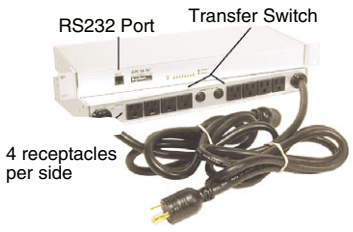

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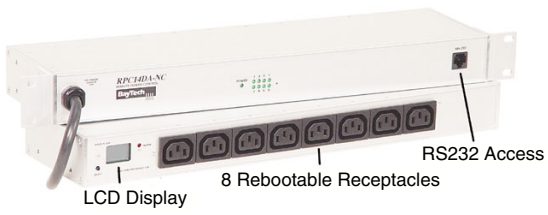

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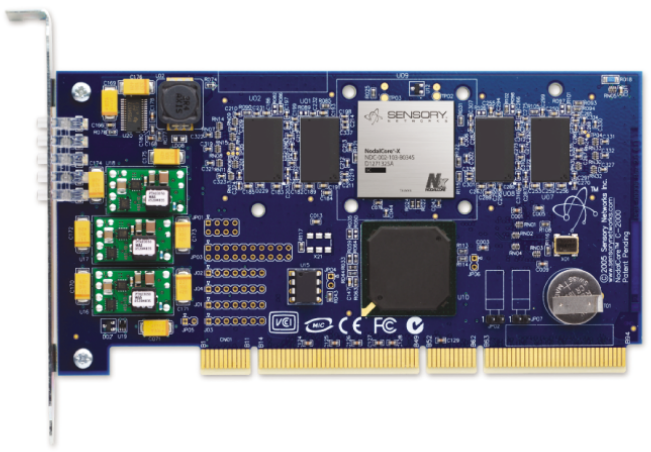

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NETWORK & SYSTEMS MANAGEMENT — DECEMBER 22, 2006

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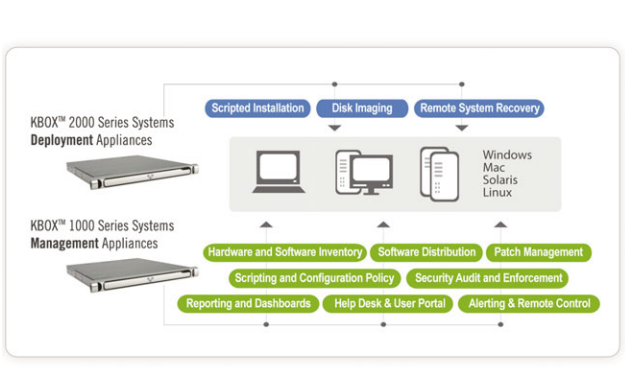

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STORAGE — DECEMBER 8, 2006

A Better Way To Store Data

Sans Digital's AccuRAID Series Offers New Rackmountable Storage Solutions

THE NEW SANS DIGITAL AccuRAID Series features rackmountable RAID storage solutions designed for file servers, backup, audio/video streaming, and digital video recording. Featuring hotswappable, 3.5-inch SATA I/II drive trays, these units can be scaled up to 9TB using the 2U 12-bay rackmount unit or 12TB using the 3U 16-bay rackmount unit.

These units can easily be configured to RAID levels 0, 1, 0+1, 3, 5, or 6 or to a simple JBOD configuration. The AccuRAID series also features a built-in Ethernet management console and email server, which means you can actually configure your system via a Web browser and receive emails if a problem occurs. Featuring durable, heavy-duty steel housing and a user-friendly LCD panel, the AccuRAID series is the perfect storage solution for all of your data storage needs.

Features:

- Supports Dual-Channel SCSI U320 (AR212S/AR316S) or Dual 4Gbps Fibre Channel (AR212F4/AR316F4)
- Intel 80321 400MHz 64-bit RISC processor with 256MB onboard ECC cache memory (upgradeable to 1GB)

- Areca SATA II RAID 6 ASIC engine provides the highest level of data protection
- Tagged command queuing for 256 commands; allows for overlapping data streams
- OS-independent/host transparent RAID solution
- RAID 6 can tolerate multiple drive failures without downtime or data loss, which helps to provide the highest level of data protection
- Online Array roaming, online RAID level/stripe size migration, and online capacity expansion
- System management through LCD control panel, Ethernet, and RS-232 port
- Supports the latest SATA II 750GB hard drives

Sans Digital AccuRAID Series

Rackmountable storage that can be scaled up to 12TB

(800) 980-1988

www.Processor.com/SansDigital2

SANS DIGITAL

Product Releases

COMMUNICATIONS

Network & Systems Management

■ **Net Optics** announced a new permanent passive access point, the 10/100Base-T Slim Tap, which has redundant power connections and front-mounted connectors. It supports monitoring devices such as protocol analyzers, probes, and intrusion detection systems. The access point allows the monitoring device to access the traffic as though it were inline with the network. The access point does not cause packet delay, thanks to Net Optics Zero Delay technology. The Slim Tap has an RS-232 port and a numeric utilization display. Up to six Slim Tap devices fit in a single rack.

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■ **Network Instruments** announced its line of Aggregator nTAPs that provide an up to 512MB buffer to reduce dropped packets on a Gigabit link. The Aggregator nTAPs provide visibility to both sides of a full-duplex data stream and combine the data into a single stream for analysis and security devices. Each Aggregator nTAP supports 10/100/1000Mb network traffic and has two separate simplex ports to stream data to devices with single-receive capture interfaces.

Switch

■ **Alcatel-Lucent** announced the Alcatel-Lucent OmniSwitch 9800 switch, high-density 10-Gigabit Ethernet module, and PoE (power-over-Ethernet) Gigabit Ethernet module. The Alcatel-Lucent OmniSwitch 9800 switch chassis features twice the capacity of the 9700 model and delivers wire-rate processing for IPv6/IPv4 with support for multicast applications. The OmniSwitch 9000 series switches provide up to 384 ports of PoE-enabled 10/100/1000 Ethernet and feature both stackable and modular edge switches.

Telephony

■ **Covad** and **TalkSwitch** have joined to deliver a comprehensive voice and broadband communications platform specifically designed for small businesses. The bundle consists of Covad's ClearEdge Integrated Access high-speed voice and data line and TalkSwitch's 480vs, which is a self-installable telephone system.

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■ **Linksys** unveiled its iPhone family of VoIP products, which includes seven phones that are immediately available in the United States. The new phones are the iPhone Cordless Internet Telephony Kit (CIT200), iPhone Dual-Mode Internet Telephony Kit (CIT300), iPhone Dual-Mode Cordless Phone for Yahoo! Messenger with Voice (CIT310), iPhone Dual-Mode Internet Telephony Kit for Skype (CIT400), iPhone Wireless-G IP Phone (WIP300), iPhone Wireless-G IP Phone with Web Browser (WIP330), and iPhone Wireless-G Phone for Skype (WIP320). Products in the iPhone family integrate popular communication clients, such as Skype and Yahoo! Messenger with Voice, to give users the ability to see when their friends and family are online and ready to receive a call. Using phones in the iPhone family, callers can toggle between the free VoIP calling options and traditional landline service.

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■ **Multi-Tech** announced the CallFinder CDMA cellular gateway to let businesses use wireless networks instead of landlines to connect calls between cellular phones and their headquarters. The cellular gateway connects to a PBX trunk line or PBX extension and routes incoming and outgoing calls through a CDMA wireless network. The CallFinder CDMA connects a company's PBX and CDMA networks so that the calls between the two can be made at no charge and to provide a backup in the case of landline failure.

Video

■ **Avocent** has extended USB 2.0 and DVI functionality to remote workstation access over TCP/IP. The improvements will show up in at least one new product in 1H07. Avocent says that it will use compression that's 10 times better than the compression of any comparable product. Because of this it will be possible to replicate single and dual video sources with resolutions of up to 1,920 x 1,200.

END NODES

Data Collection

■ **Microscan** announced the release of its MS-Connect 200 for any Microscan bar code reader. The MS-Connect 200 provides one connectivity point for inputs, outputs, and power. Additionally, the MS-Connect 200 is IP65-rated, can withstand unforgiving factory environments, and includes an ultra-bright display, four access holes, and wide terminal strips. The product also gives users easy access to reader functions and lets them trigger a read cycle, set a new master symbol, and monitor output activity from the front panel. In addition, there's an internal default switch and connections for a backup reader.

Printer

■ Lanier Worldwide is targeting its new monochrome laser printer at departmental workgroups, CRDs (central reprographics departments), and data centers. The Lanier LP275hdn offers image quality up to 1,200dpi and print speeds up to 75ppm. It also has a built-in duplexing feature and supports PC and Mac networks. The printer's security features include 128-bit encryption, network authentication, and a virtual electronic mailbox. Customers can choose from

Go to Page 17

A Flexible Storage Solution

NetApp Extends Its Reach To The SME Market

by David Gilbert

• • •

IT MANAGERS for small to medium-sized enterprises often find themselves in need of a storage solution that is network-capable, highly scalable, and manageable. Previously, the only products that could meet these needs were available exclusively to the enterprise market due to their high cost and complexity. That has changed with the introduction of the S500 by StoreVault, which combines software and hardware features to support a broad range of capabilities for the SME.

One benefit to the S500 is its enhanced versatility. By employing the S500, a user is no longer forced to commit to a certain storage interface or capacity or network topology at the outset. This product supports iSCSI or Fibre Channel interfaces, scales from 1TB to 6TB, and supports NAS or SAN usage. For users with multiple physical locations, the S500's software features offer further advantages. The StoreVault Manager 2.0 management interface is capable of replication for either file data or block data. All these features are there without sacrificing the ease of use SMEs desire.

The StoreVault S500 is a 2U rack-mountable storage unit with up to 12 250GB SATA I or 500GB SATA II hard drives, running on NetApp's well-established Data ONTAP embedded OS. It features dual redundant hot-pluggable power supplies, on-the-fly firmware upgrades, and 256MB of nonvolatile memory with three days of retention potential for "in-flight" data. All hard drives are hot-swappable, which enables online storage expansion and reallocation. The S500 also has impressive backup and restore features. Backups can be run without disrupting user access, and entire storage volumes can be restored in a matter of minutes, thanks to the software's "snapshot" feature. Up to 255 snapshot images per volume can be stored for later retrieval.

Drew Meyer, a product marketing manager for the StoreVault Business Unit, says, "The StoreVault S500 has integrated enterprise-proven technologies into a solution that is simple to deploy and manage and is affordable for SMBs." He points out that the S500 is sufficiently differentiated from competitors' offerings, such as HP's MSA (Modular Smart Arrays; www.hp.com) 1510i & 1500, EMC's AX150i and AX150 (www.emcinsignia.com), Adaptec's SnapServer 520 (www.adaptec.com), the HP AiO (All-in-One) 400 and 600, and the Dell PowerEdge 2950 (www.dell.com).

SNAPSHOT

NetApp StoreVault S500

All-in-one storage appliance that is capable of NAS, SAN, and DAS right out of the box with capacities ranging from 1 to 6TB

www.storevault.com

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Product Releases

Continued from Page 16

such finishing options as a 3,000-sheet saddle stitch finisher, a staple and hole-punch finisher, and a cover interposer.

Storage

■ **ACARD** has launched a 1-to-3 HDD Copy Controller, the ARS-2030LF, that includes an integrated LCD. The controller can perform as a standalone IDE-to-IDE copy controller or an independent IDE channel and includes a self-test at power up and firmware updates through an ODD. After connecting source and target hard drives, you can use the controller to copy data, audio, or video files without having to have any recording technique or knowledge about using the device. Additionally, the controller is applicable for MIS or other departments or for PC assemblers to do legal production. The ARS-2030LF supports drives from Seagate, Maxtor, Hitachi, Western Digital, and others.

ACARD also launched a SATA II converter, AEC-7923, that can transform a device with a parallel IDE interface into one with a SATA II interface. This SATA II-to-IDE converter adopts 48-bit LBA (Logical Block Addressing) and supports ATAPI devices, including CD/DVD-ROM drives, high-speed DVD writers, and Blu-ray writers. Using the ACARD SATA chip and the data transformation of SoC (System-on-a-Chip), the AEC-7923 reaches optimal computer operation that doesn't require CPU resources. After connecting an IDE device to AEC-7923, it will be recognized as a SATA device with all SATA benefits, such as the ability to hot swap drives and use energy-saving modes.

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■ **Idealstor** has released a new, ejectable Idealstor 750GB hard drive for use with all Idealstor and FrankeNAS backup systems. Idealstor's own Backup Appliance comes with Windows Server 2003 preinstalled and performs as a host for Idealstor's backup software, including the company'siBac 4.0. The Backup Appliance comes configured with one to eight removable bays, and each NTFS-formatted drive comes with Idealstor's Caddy and Protective Carrying Case for transporting the drive. Idealstor says the Idealstor 1 Bay can now natively support up to 750GB, while the Idealstor 8 Bay can store up to 6TB of native data.

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■ **Plasmon** released its UDO (Ultra Density Optical) Desktop Drive with a USB 2.0 interface. The drive provides compliant, high-capacity, and cost-effective archival storage and was previously available with a SCSI interface. The UDO Desktop Drive comes with a UDO drive, external power supply, interface and power cables, one piece of 30GB UDO Rewriteable media, and software drivers for Windows and Linux operating systems.

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■ **Spectra Logic** now offers a sixth frame for the T950 to increase capacity to 7,450

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Upgraded SCOoffice Server Takes On Exchange 2007

Internet Email & Collaboration Product Gets A Facelift

by Curt Harler

• • •

SCO GROUP has upgraded its SCOoffice Server email and collaboration product with version 4.2. Aimed at the SME market, it has enhanced task management capability, shared address books, and group scheduling. The new version, which does not require technical administration, also offers protection against spam and viruses.

There is little question that Server 4.2 is positioned by SCO to compete with Microsoft's Exchange 2007 (www.microsoft.com).

"We regard our server as an alternative to Exchange," says Andy Nagle, product manager for SCOoffice Server. He says the SCO product's biggest selling point is its ease of administration. "You do not need an IT pro to administer SCOoffice Server," Nagle says. "It is still focused on providing an easy-to-use interface. It can be handled by an office manager."

Nagle says the primary improvement with 4.2 is that it is the first version of SCOoffice to run on both the SCO OpenServer 6 and UnixWare 7 platforms. "These are highly scalable operating systems," Nagle notes. It also offers improved integration with Microsoft's Outlook, Qualcomm's Eudora (www.qualcomm.com), and Netscape (www.netscape.com) clients.

The latest edition offers the possibility for a single SCOoffice Server to host several mail subdomains. Each subdomain remains separate from the others. So, for example, users in one subdomain will not be able to see address books from another domain (unless it is specifically allowed).

"This makes it possible to host several domains on one server," Nagle says. It opens the door to SCOoffice Server to be used by an ISP that serves multiple customers.

SNAPSHOT

SCO Group SCOoffice Server 4.2

Five-user license: $299

Email and collaboration software offers enhanced Microsoft Outlook integration; also supports Qualcomm Eudora, Netscape, and others

www.sco.com

The 4.2 version includes a native Web client with calendaring and task management. It offers collaborative support via its Web client that is compatible with Internet Explorer, Netscape, or Mozilla's Firefox (www.mozilla.com). Users can access their email from any WAP (Wireless Access Protocol) browser.

"This is a combination of very mature open-source software—including Apache [www.apache.org] and Cyrus [cyrusimap.web.cmu.edu] and other open-source packages for administration—along with other software supplied by SCO and a Web client," Nagle says. "It works well for users who still want to use Outlook."

Also new with 4.2 is the conversion of its code to UTF-8 coding for characters. This makes it easier to extend the product to support more non-English languages, including Chinese. Currently, it supports all of the standard European languages and Portuguese for Latin America, among others.

While SCO has not yet announced specific plans for its next release, look for future versions to advance in the direction of mobility. One focus, in keeping with the company's strategic planning, is improvement in integration with handheld devices.

The company will also likely expand the product beyond the SME space into installations with tens of thousands of seats. As long as it remains smaller-user friendly, this could be a good thing as it will expand the product's market penetration and bode well for upgrades and product support.

CNG-SAFE Gains Versatility

Document Management Upgrade Adds Adobe Capability, Strays Off Named Paths

by Curt Harler

• • •

WHEN IT COMES TO document management, a key buying factor is how flexible the software is—from scanning to searchability. CNG-SAFE (Shared Access Filing Environment) 5.8 from CabinetNG includes several upgrades that make it more versatile. The key benefits of the latest version are enhanced rules-based workflow and the ability to convert, scan, or export any image file format into a standard PDF.

According to Jim True, vice president of business development at CabinetNG, another key upgrade is enhanced content search. It allows text search across multiple secure electronic file cabinets. Called Dynamic WorkFlow, it allows users to define rules that will route documents electronically based on many variables rather than forcing a document to follow a named path to its destination. Documents can be routed into different workflows based on any defined field. Status of all in-process workflows is displayed and can be approved or rejected from one computer screen. For example, if a bill comes in for a large amount, it likely requires a high-level signature. That particular bill can be workflowed to the company treasurer instead of going to a clerk in accounts payable.

Under the old system, if a worker was searching for an old invoice that is the object of a court battle, he might first look in bills or accounts payable. But the document might be filed under legal. With the new upgrade, all electronic file cabinets are searched. Another upgrade is its email alerts, which send users receipts of documents into their WorkFlow inbox. It sends notification delivery even if the user is not logged on.

The program integrates with QuickBooks accounting software through CNG-Books 4.0.

A standalone license is available for $995. More typical is the five-user concurrent license at $1,395. It allows many users access—but only five at once. This serves several people who need occasional access or where there might be three shifts working at a company and 20 users per shift. The SME buys one 20-user concurrent license instead of a 60-user license.

According to Rick Nay, president of Rick Nay Insurance Services, which recently upgraded to CNG-SAFE 5.8, CabinetNG's tech support is an added benefit. "They are unbelievable. You get a human who works with you no matter how stupid you are. There might be a better program out there, but their tech support gets me and my people to where we can use it. That makes it the best in my book," he says.

SNAPSHOT

Cabinet NG Shared Access Filing Environment

$995 for basic standalone license

Document management platform designed for SMEs

www.Processor.com/CabinetNG1

In a similar vein, Oracle's Workflow (www.oracle.com) automatically processes and routes information according to user-established business rules. It will move data to anyone or any system. Savvion's BusinessManager 7.0 (www.savvion.com) includes its Business Rules feature, an event management system to define and manage business rules. The graphic tool set, designed specifically for managers and business analysts, makes it easy to create and manage rules and events. Pegasystems (www.pegasystems.com) also offers a solution, PegaRULES, a system that includes "if-then" types of logic for managing and executing business policies and practices.

Product Releases

Continued from Page 17

tape slots, or nearly 10 petabytes. The expanded T950 can still use a single robot to access up to 120 drives with a native LTO-3 throughput of up to 9.6GBps. Pricing begins at $160,000.

Components

■ **Adlink Technology** has launched a half-sized, fanless, single-board computer called the NuPRO-796 that uses an AMD Geode GX 533 CPU, which is a 1.1W processor. The computer comes with 128MB of DDR-226 memory on one SODIMM slot, one UltraATA 66 IDE connector, and four SATA connectors with RAID support. The system supports CRT monitors, TFT LCDs, and LVDs and includes an ACPI-compliant 10/100BASE-T LAN port, four USB 1.1 ports, AC'97 Audio, and a watchdog timer. Compatible with Adlink's wall-mountable RK-604A chassis and six-slot RK-606FC chassis, the NuPRO-796 starts at $390 with discounts for volume purchases.

SOFTWARE

Business Productivity

■ **IBM** has announced that, together with **Yahoo!**, it will offer free software for enterprise-level searches. IBM OmniFind Yahoo! Edition can search not only the Internet but also a company's own intranet. IBM OmniFind Yahoo! Edition uses the Lucene indexing library and supports as many as 500,000 documents per server. It is compatible with more than 200 file types and more than 30 languages. IBM OmniFind Yahoo! Edition also includes automatic spell correction, shortcuts, wildcard support, query reporting, and customization of the GUI.

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■ **NCR's** Teradata division announced an updated version of its Teradata CRM (Customer Relationship Management) software. The new version includes features such as complex offer optimization, extended access to marketing automation, simplified data import capabilities, and expanded Web compatibility, all of which were added in response to a user poll asking for the most sought-after features.

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■ **Lortu Software** has introduced new software components to provide deduplication, replication, WAFS optimization, and WAN optimization through Byte-level Delta Deduplication Technology, which is more thorough than other methods such as file deduplication, data compression, and block-level deduplication. With Lortu Software's Kondar technology, the software can perform delta-based caching deduplication, create patch files with changes to stored files, or create a data vault.

Network & Systems Management

■ **Altiris** released updates to the Altiris Server Management Suite that will help secure and manage heterogeneous server environments. The suite updates include patch management for Red Hat Enterprise Linux, improved support for VMware ESX virtual server, and fault monitoring for Microsoft Exchange Server and SQL Server. Altiris also announced Server Management Suite For Dell Servers to provide integrated deployment, patch, and monitoring capabilities for Dell servers. The Dell suite also features integrated remote hardware configuration and application deployment.

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■ **Codeorigin** has launched Sysax FTP Automation 4 for automating file transfers in a Windows environment. The software supports both SFTP and FTPS; provides transfer-status monitoring, email alerts, and log files; and supports public key authentication for SSH-based SFTP and client-side certificates for SSL. Codeorigin has included a native NT service for scheduling as well as tools for developing scripts and debugging software. Sysax FTP Automation is compatible with Windows 9x/Me/NT/XP/2003/Vista. System requirements are 4MB of available disk space and 64MB of RAM. Sysax FTP Automation Professional is available for $97.

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■ **SWsoft** announced Plesk Expand 2.1 with new features that make it easier for service providers to manage Plesk servers from a central location. The software also adds support for Red Hat Fedora Core 4, CentOS4, and Red Hat Enterprise Linux 4. One key feature in Plesk Expand 2.1 is a new client/domain migration capability that lets administrators move an account from one Plesk server to another. Additional features include single-point trouble ticket management, auto-update license, VZ Templates, single startup script, and Virtuozzo Control Center Web panel for Plesk Servers installed in Virtuozzo.

Security

■ **Tenable Network Security**, in conjunction with **Digital Bond**, announced several new plug-ins and tools designed for Tenable's Nessus 3 vulnerability scanner platform. Tenable Direct Feed subscribers and Tenable Security Center customers can now download a Passive Vulnerability Scanner and the new plug-ins to further limit vulnerabilities, help assess risks, support business continuity, and protect sensitive data.

Storage

■ **Voyence** released the Geo-Diverse High Availability package for VoyenceControl NG, which simplifies disaster recovery. The package supports geographically diverse device server and application failover and fail-back. The interface lets users assign failover pairs and start failover or fail-back recoveries. The package supports asynchronous replication for production and standby systems. Users can manage VoyenceControl NG servers from the application or servers. The package lets users access the user interface or a command line.

SERVICES

Security

■ **Sacure** is offering to scan one externally-facing IP address and report back to you on known or potential vulnerabilities, at no charge. The offer is only good through the end of next month, though, so act soon if your company is interested in the deal.

• • • • •

■ **Symantec** introduced new service models designed to help medium-sized and large businesses manage IT infrastructure and reduce system-wide vulnerabilities. The Symantec Operational Services lets businesses offload vital IT tasks to Symantec to remotely or locally manage. Businesses that take advantage of the new Symantec Residency Services can hire Symantec personnel to work on-staff as either database or antivirus experts on a fee basis.

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Lenovo Brings Power & Flexibility To The Tablet PC Market

New X60 Tablet Has Many Innovative Features

by Tony Bradley

• • •

When the Tablet PC was first introduced, many thought it seemed like a frivolous gimmick more than a functional productivity tool. However, as vendors have refined the technology and developers have come up with new ways to utilize the unique features of the Tablet LCD, it is becoming the cutting-edge notebook of choice for many users.

Lenovo, which purchased the IBM Personal Computing division, has created the ThinkPad X60 Tablet PC, which brings a number of powerful and versatile features to the Tablet PC arena. Mike Hagerty, worldwide segment manager for Lenovo's ThinkPad X Series, says, "Tablet PCs are becoming increasingly popular in mobile professional fields, such as healthcare, insurance, real estate, education, and sales. Tablet PCs blend the performance of a notebook with the natural interaction of a tablet to fit this type of user's requirements."

Lenovo, which purchased IBM's Personal Computing division, has created the ThinkPad X60 Tablet PC, which brings a number of powerful features to the Tablet PC arena.

Lenovo is certainly not the first to bring a tablet PC to the market. The Toshiba Tecra M7-S7311 (www.toshiba.com) and the HP Compaq tc4200 (www.hp.com) are both examples of tablet PCs competing with the Lenovo ThinkPad X60 Tablet PC.

Lenovo's Hagerty points out some unique features of the ThinkPad X60 that set it apart. "The MultiTouch feature enables people to use their finger or the pen to interact with the Tablet. The MultiView indoor/outdoor, antireflective, antiglare display helps viewability in multiple settings. Finally, the Active Rotate screen function orients the screen to the user no matter which direction it turns. With this function turned on, 'up' is always 'up' no matter which direction the Tablet turns. This feature also allows for easy collaboration in mobile settings."

SnapShot

Lenovo ThinkPad X60 Tablet PC

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Starting at $1,799, the ThinkPad X60 is in the middle of the pack price-wise. However, comparing bang for the buck, it may be the best value going right now. The ThinkPad X60 has larger, more powerful, more current options than competitors, such as a 100GB hard drive, 802.11n MIMO wireless connectivity, and built-in WWAN (wireless WAN) capabilities to connect with wireless broadband providers.

These options, combined with the new features such as Active Rotate, raise the bar for the tablet PC market and provide a value for notebook users who can benefit from the unique features of a tablet PC.

Smartphones Beware

New Viruses On The Horizon Target These Devices

by Julie Sartain

• • •

Blaster, Melissa, I Love You, Code Red, MyDoom, and Sasser—ring a bell? These are six of the most destructive viruses of all time, costing businesses worldwide almost $100 billion in damages. If your company was infected with one of these malware products, then you remember the nightmare. Now, take that experience and double it. Some new viruses are attacking mobile phones first, disabling those lines of communication, and then entering the corporate network through the phone system, which then disables the entire corporate intranet.

In an effort to keep ahead of these attacks, Trend Micro has updated its Mobile Security product to version 3.0, which presently supports devices using the Windows Mobile 5.0 operating system and will support devices running Symbian OS 9.1/S60 3rd edition devices next year. The enhanced product includes the addition of a firewall and IDS (intrusion detection system). The firewall protects mobile devices from hackers and malcontents attempting to access a device through the network.

"To understand how Trend Micro Mobile Security (TMMS) is used," says Todd Thiemann, director of device security marketing at Trend Micro, "You must first understand the threat—it's more 'proof of concept' today but has all of the signals of turning virulent in the future. Malware for mobile devices has focused on the smartphone operating systems; for example, Symbian and Windows Mobile OS."

Enterprises perceive the threat affecting today's desktop PCs and laptops will soon migrate to smartphones, notes Thiemann. Smartphones are basically "mini computers," which have become quite powerful and essential to worker productivity. You can now buy Secure Digital storage cards with 4GB of memory—that much memory can hold the entire customer database of a midsized to large company.

Deploying the same desktop/laptop-style security to smartphones is one way to begin combating the threat. "We find that smartphone deployments are typically driven by enterprise applications like 'push' email; mobile customer relationship management (CRM), such as Siebel [www.oracle.com]; enterprise resource planning (ERP), such as SAP [www.sap.com]; and/or field service automation (FSA) packages," says Thiemann. "TMMS is deployed onto the handset, and the virus definitions on the device are periodically updated over the air (OTA). Enterprises can deploy and administer TMMS through their existing device management infrastructure."

Deploying desktop-style security to smartphones is one way to begin combating the threat.

SnapShot

Trend Micro Mobile Security 3.0

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Competition includes all the major security software players, such as McAfee (www.mcafee.com), Symantec (www.symantec.com), and a host of others. TMMS is unique in several ways: its relatively small footprint (memory and CPU utilization), the combination of antivirus and firewall for Windows Mobile 5.0, and the upcoming release for Symbian S60 3rd Edition (for Nokia E-Series devices).

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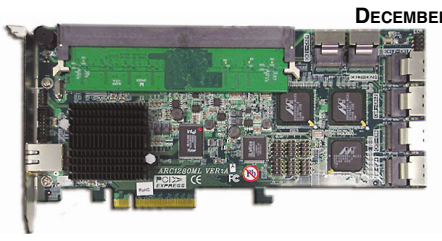

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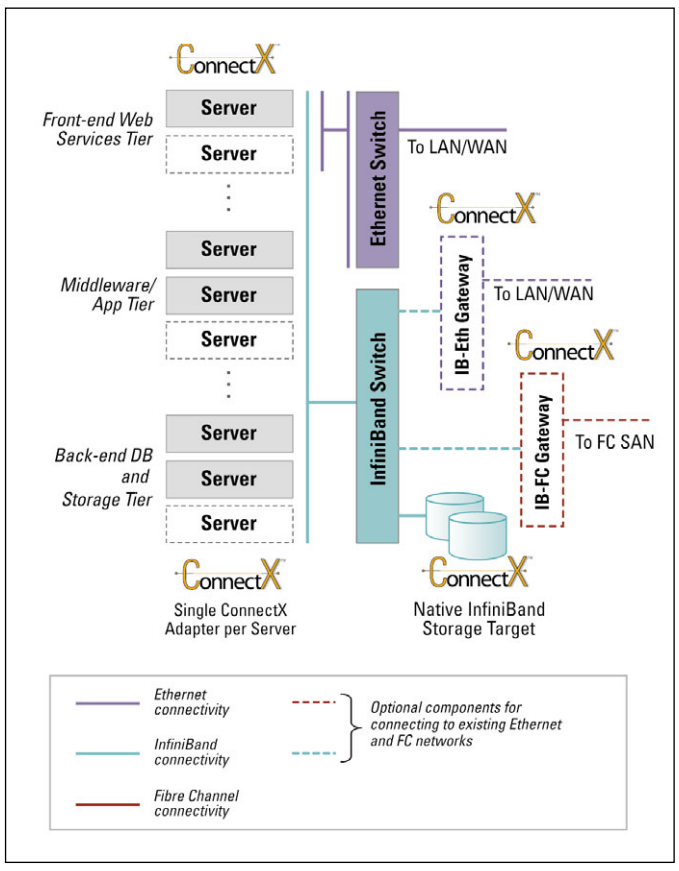
Mellanox, which is known for its advances in InfiniBand technology, has created the new ConnectX architecture to address the data center need for cost-effective bandwidth, improved quality of service, and protection of an enterprise's infrastructure investment. With ConnectX-based solutions, you're ensured of incremental and demand-based I/O growth and scaling well into the future.

The ConnectX architecture enables integration of extraordinary levels of functionality into a single adapter chip. It supports eight lane PCI Express v1.1 and v2.0 interfaces as the host interface. For network and storage connectivity, it supports two network ports, and each port can be flexibly configured as either a 4X InfiniBand port or a 10 Gigabit Ethernet XAUI/CX4 or XFI port. The InfiniBand port supports single, double, and quad data rates (SDR, DDR, and QDR) delivering 10, 20, and, eventually, 40Gbps full duplex bandwidth.



A typical deployment scenario, with ConnectX-based server blade mezzanine cards in server blades with one InfiniBand port and one 10Gb Ethernet port.

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The ConnectX architecture offers the necessary building blocks for designing leading price/performance server and storage connectivity solutions. Service-oriented I/O ensures scalable and granular quality of service for a converged set of data center applications, in both native operating system and virtualized server environments. Multiple network and storage connectivity options on a single ConnectX adapter enhance the server OEM's target markets and time to market. And end users can depend on ConnectX solutions for incremental and demand-based I/O growth and scaling.

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OPINIONS
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Drive The Server Huggers To Abstraction

Virtualization is hot right now. More precisely, x86 processor virtualization is hot because a lot of enterprises have gotten serious about server consolidation. One obstacle to virtualization has proved to be more political than technical. So-called "server huggers" need to get their heads around a new layer of computing abstraction.

A server hugger is someone who opposes virtualization because he will lose ownership and/or control over a physical server asset. Server hugging is most often identified in business units outside of IT that resist centralization and consolidation. However, server-hugging tendencies can be exhibited within IT departments, especially if the pressure to consolidate and virtualize servers is coming from outside.

Server huggers are a legacy of the distributed processing revolution. In the days before distributed processing, when hardware was centralized and terrifically expensive, only those with the keys to the golden room had authority over what could be done with a computer. With the relatively inexpensive and standardized PC, processing was distributed to the masses—both on desktops and eventually as servers.

It's The Software, Stupid

Owning a processor became synonymous with authority over the process. From this point of view, any attempt to take my box away can be interpreted as a vengeful evil empire striking back. This view is deeply flawed. It's not about hardware. It's about software. It has always been about software.

Steve Jobs, current head of Apple Computer, was able to exploit this confusion to the point of creating a hardware fetish. Hardcore Mac users were so convinced that there was something special about the physical reality of the Mac that they reacted negatively to recent moves to base the Mac on x86 processors. Yet it has always been the Mac's user interface and applications that provided the "power to be your best."

Without the software organizing all those binary 0s and 1s, my desktop computer would be little more than a rather large, humming paperweight. Yet, though we intuitively understand that it is all about the software, we still tend to confuse the bottle with the wine.

Been There, Done That

Back in the '90s, it just seemed to make sense. I was involved in a corporate communications project to exploit this new-fangled World Wide Web thing. We had done some of the initial exploratory work locally on a Windows NT workstation but wanted to go "big time"—building and maintaining a corporate Web presence. We bought an x86-based NT server and colocated it in the central data center.

My department got the software and support we felt we needed for our project through the purchase of a server—our process, our software, our Windows NT box. We knew we were getting a certain level of processing power, memory, and storage because it was in the box. Beyond the box, we had service agreements with IT for the provision of power, network connectivity, maintenance, and backup.

Owning the box simplified things, but it was also inefficient. Under-utilized capacity in the box is wasted because it cannot be transferred or shared. When capacity is fully utilized, the only way to expand capacity is to buy yet a bigger and more powerful box, which requires acquisition, configuration, testing, migration, and inevitable interruption of service.

How To Win Over The Server Huggers

Virtualization should be viewed as a win-win for all involved. The department or business unit—even the user of a virtual PC—still gets the application(s) and OS environment it wants for its process needs. But now that virtual machine can have its processing power and available storage increased without the immediate need to purchase and configure a new physical server.

The virtual machine uses only the capacity it needs. Unused capacity can be shuttled to another virtual machine. More efficient utilization and multiple virtual machines hosting means fewer physical servers need to be purchased and maintained. Availability can also be improved if the infrastructure allows virtual machines to be dynamically moved from one physical box (or blade) to another.

The catch is that the owners of the virtual machines have to get their heads around the idea that they can own a server without owning a physical machine. This is not easy as certain levels of processing, memory, and storage capacity, and even the kind of OS and software, are guaranteed in the fixed physical asset. Now all of those elements are abstracted and fluid.

The guarantee now has to take the form of a clear agreement between the service provider (for example, IT) and the user. Making virtualization work will require transparency, accountability, and communication from the IT department. Essentially, it will be about building trust. Trust can often be a harder thing to build than a server.

Send your comments to infotech@processor.com

JOHN SLOAN

AUTHOR *John Sloan is a senior research analyst at Info-Tech Research Group. He has more than 15 years of experience as a technology writer, as well as experience in corporate communication, Web site development, and electronic publishing. His research interests include electronic publishing and communications (including e-learning), disaster recovery planning, desktop computing, and Web application development platforms. Sloan holds a master's degree in journalism from The University of Western Ontario.*

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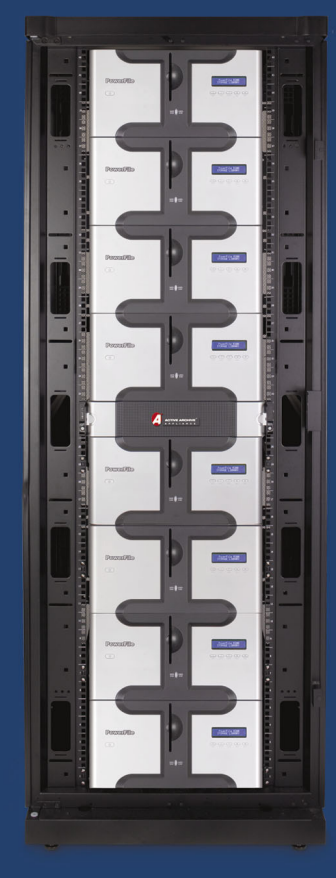

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Data Storage Connection
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Demystifying Event Logs

Put Event Logs To Work For Better Security & Compliance

by Will Kelly

• • •

While Event Logs are a rich information repository ripe with intimate details about network, application, and user events, many enterprises aren't tapping this resource of performance and forensics information. However, SMEs often overlook analyzing event logs because from the outside it poses an overwhelming proposition.

Analyzing your SME's event logs is a necessity for many compliance programs and for specialized network security and forensics applications. Even for day-to-day operations, a view of your event log data enables you to be proactive when security issues and other network issues first present themselves.

There are two schools of thought when it comes to event log monitoring. While both take a proactive approach, one uses a search engine model, and the other uses a traditional monitoring approach through a dashboard or other alert mechanism.

Event Log Management Best Practices

Anton Chuvakin, director of product management for LogLogic (www.loglogic.com), developers of the LogLogic 3 event log management appliance, has seen a number of log analysis mistakes from customers. He advises that you always enable logs and set sufficient retention periods. Setting sufficient retention periods may require some experimentation. For Windows-based machines, Chuvakin recommends from 30 to 90 days.

He also advises a proactive approach to handling log management vs. opening them when a network outage or security issue occurs. "Not looking at the logs until something happens is a big mistake," according to Chuvakin, because regular viewing of your logs enables you to see early signs of problems, such as security incidents like probes, not just trends.

Andre Muscat, security product manager for GFI Software (www.gfi.com), developers of the GFI EventsManager, says, "Information in event logs is distributed and unstructured. Many enterprises are overwhelmed by the process, and such analyzing event logs are often overlooked in SMBs." He further notes that "70% of information in logs is irrelevant." He says that SMEs should step back and define their goals for event logs analysis. "Logs are written by developers, not managers or system administrators."

Choosing an appropriate event logs monitoring solution requires that you first determine your requirements. Muscat advises that you ask, "What do you want to achieve with the solution?" You need to define your business requirements, such as real-time alerts, security policy violation detection, and policy adherence, based on your internal business needs and/or compliance program requirements.

When identifying the best event logs monitoring solution, Muscat says, "Evaluate the products in the corporate environment and never rely on just marketing information. This goes beyond attending demos and forums discussions or reading the list of features. This requires serious evaluation in your environment as well as professional backup by auditors and experts that can confirm whether the yielded results meet the corporate requirements or not."

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Tips For Implementing An Event Log Management Tool In Your SME

- Define your expectations and requirements for the event log management tool.
- Set a suitable retention policy for your event log data (30, 60, 90 days).
- Automate your event log review with software tools.
- Download and evaluate log management tools with an eye for a tool that will be there for the long run.
- Spend the time to configure and tune the log management tool you use to take advantage of the appropriate log views and automated alerts.

Log Management Tools

Corner Bowl Software

www.diskmonitor.com

Network Event Viewer enables the management, consolidation, and analysis of multiple local and remote Windows Event log files simultaneously.

GFI Software

www.gfi.com

GFI EventsManager collects data from all devices that use Windows event logs, W3C, and Syslog and applies the best rules and filtering in the industry to identify key data.

LogLogic

www.loglogic.com

LogLogic 3 is an appliance that enables the collection and aggregation of raw log data from any connected data source, analyzes that data in real time, sets alerts to warn of suspicious behavior, and safely stores all data for on-demand retrieval.

Splunk

www.splunk.com

Splunk indexes and securely manages all your logs and IT data. It's easy to download, install, and use, and it's very powerful. You can search, navigate, alert, and report on logs and IT data from any application, server, or network device in real time.

VeriSign

www.verisign.com

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PROCESSOR

Instant Messaging, Instant Headaches

New Ways To Keep IM Systems Secure

by David Garrett

• • •

As scandals go, it was one for the record books. When former Congressman Mark Foley was caught sending lewd instant messages to underage pages, the fallout not only scotched his career, but changed the course of the midterm elections.

It also gave IT experts something to think about. IM, once the sole province of teens and tweens, has long been used in the enterprise by workers who glom on to its convenience for chatting and file transfers. But just like email, it has its own set of threats, some of which make even the rampant problems of email seem like cakewalks.

According to Don Montgomery of IM security firm Akonix (www.akonix.com), Trojans and worms can spread with astonishing speed through IM systems simply by sending themselves to everyone in a user's buddy list. "It spreads by orders of magnitude faster than email," he says, noting that even the average IM user can have 30 buddies. The end result is "six degrees of separation" with malware that can "pretty much get to the entire world."

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Barracuda IM Firewall
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www.Processor.com/Barracuda13

FaceTime Internet Security Edition
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www.Processor.com/FaceTime

Calling All Criminals

Perhaps that's why 2006 saw an uptick in IM security. Montgomery says that traffic on the Akonix Web site has soared, along with calls to the company's sales line, as a growing number of SMEs move instant messaging off their radars and onto their agendas.

Mark Levitt, program vice president for collaborative computing and the enterprise workplace at IDC, says that companies have slowly grown to realize the need to police IM systems. "IM is like email; it's like voicemail; it's like other business communication tools that need to be supported, controlled, and managed," says Levitt. "This has led to more enterprise IM systems in the past."

But unlike the past, IM hacking has gone from annoying to downright criminal, with attacks that attempt to steal data and money, often by tracking usernames and passwords with keylogging programs that come alive when users visit a banking Web site.

IM security firms have evolved along with hackers. "We've never pretended that our customers are naïve enough to talk about full protection," says Montgomery, noting that no defense can keep every threat out. Instead, Akonix promotes new strategies that aim for near-total containment, checking any instant message sent through its system for an embedded URL, which in turn is checked against a public database that determines if it points to a fraudulent Web site.

If the URL is unknown—thus neither good nor bad—Akonix systems challenge the sender with a question, such as "What is 2 + 3?" As opposed to humans, bots and Trojans can't answer, and their messages are stopped. "Since we're challenging the sender, we're throttling [the problem] at one PC," said Montgomery. It stops the malware disease from becoming an epidemic.

Helping With HIPAA

A growing concern with compliance—the complex demands of Sarbox, HIPAA, Gramm-Leach-Bliley, and other laws—has also made its mark on IM security.

Managed solutions, such as WebEx AIM Pro (www.webex.com), can help companies deal with compliance questions without having to install hardware or software themselves. "It allows them to archive and log all the conversations that happen over IM," says Anand Ramanathan of WebEx.

It also lets them use policies to enforce security, he notes. Take the financial industry, where laws strictly limit communications between bankers and analysts. AIM Pro can check the group membership of an IM sender and limit his chat partners based on that membership. "You can set Chinese walls where you can allow certain groups only to talk to certain other groups," says Ramanathan.

Where HIPAA applies—in which the private data of patients must be kept sacrosanct—admins can use policies to scan traffic for keywords, strings, or patterns, such as nine-digit numbers that could be Social Security numbers. "Those types of content can be filtered by our solution," says Ramanathan.

The Rise Of Unified Messaging

IDC's Levitt notes that companies subject to Sarbox, HIPAA, and other laws "need to have cutting-edge solutions for being able to track, retain, and, at some point, completely delete messages that they're not required to keep and therefore could be a liability."

There's also the looming potential of lawsuits and the sometimes extreme demands of e-discovery. A recent change in the federal rules of civil procedure, which became effective on Dec. 1, ups the ante for producing ESI, or electronically stored information. The new regulations "make it clear that any kind of digital or electronic information needs to be controlled in a better way," says Levitt, who called the rules "very expansive" and notes they clearly apply to IM.

As for the future, Levitt sees a business landscape where unified messaging is common, as email, voicemail, IM, Web conferencing, and more converge into a single inbox for simplified management. Companies such as Microsoft (www.microsoft.com), Cisco (www.cisco.com), Nortel (www.nortel.com), Avaya (www.avaya.com), and Siemens (www.siemens.com) have begun to promote a vision in which "instant messaging is no longer just instant messaging; email is no longer just email; and Web conferencing is no longer just Web conferencing," says Levitt. "It's part of a much larger solution."

As a result, IM security could merge into a larger, unified approach to protect all types of messaging, where one set of policies applies across the board to email, IM, and even voicemail or collaboration tools.

How far away is that horizon? If the past is any guide, it's close enough to start planning for it now.

IM Defenders

Some of the biggest names in IM security include:

Akonix

www.akonix.com
Akonix products include the A6000 and A1000 appliances, the latter designed for SMEs that want a turnkey approach to IM management and defense. Akonix also offers the L7 Skype Manager to cope with a consumer app that enterprise users are downloading in ever greater numbers, often without the consent of IT departments.

Barracuda Networks

www.barracudanetworks.com
Barracuda, which makes spam filters, Web filters, and load balancers, also sells an IM Firewall device that combines an IM server and gateway into a single unit to secure, log, and inoculate IM traffic. The firewall boasts a unified client for popular IM networks, not to mention file transfer and keyword/content management features. Barracuda offers prospective clients an evaluation unit, so they can try before they buy.

ScanSafe

www.scansafe.com
ScanSafe's managed service scans inbound and outbound IM traffic for virus attacks, Trojans, and suspicious behavior that indicates ID theft. It also offers real-time alerts and customized reports, as well as logging, archiving, and tie-ins with corporate email archive solutions.

Symantec

www.symantec.com
Symantec's IM protection system centers on the IMlogic IM Manager and Symantec's RTTPS, or real-time threat protection system, a global network that, according to Symantec, can detect and defeat virus attacks hours before antivirus signatures are released.

WebEx AIM Pro

www.webex.com
AIM Pro is not an IM protection system, per se, but a fully outsourced business-class IM service with advanced threat detection, logging, content management, and other security features built in. It also integrates with the WebEx meeting platform, which lets users share voice, video, and data in real time.

The Three Rules

According to Don Montgomery of Akonix (www.akonix.com), protecting instant messaging systems is a bit like protecting email or even networks themselves, with three goals:

- **Keep the bad stuff out.** This includes malware such as Trojans and virus attacks.
- **Keep the good stuff in.** This includes your firm's trade secrets, project plans, usernames, and passwords.
- **Protect your company from itself.** Watch out for vulgar language, harassment, and other threats that depend not so much on technology but the bad behavior of employees.

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Improving IT's Performance

Knowing Where You Stand Among Similar Companies Will Help

by Paul Ferrill Jr.

• • •

ASSESSING THE OVERALL performance of a business boils down to numbers. Positive numbers for profit and growth usually indicate a healthy company. When those numbers begin to decline or head into negative territory, the executives start to worry. More often than not, one of the most significant contributing factors to declining profits is cost.

Forrester's Three-Step Plan

Forrester's December 2005 report, "Trends in IT Performance Management," recommends a three-step approach to get things moving.

Form a strategy. Unless you understand what the strategic objectives of the company are and how IT fits in, you won't know where you're going.

Involve stakeholders. Unless you get everyone involved and solicit multiple perspectives, you won't get a balanced picture of expectations.

Enlist champions. Measuring and managing performance will often require cultural changes in the organization. Support from management and those responsible for making it happen will be vital to success.

The overall cost of IT has, in general, gone up for most sectors of industry. Looking at IT spending growth over the years as compared to the U.S. Gross Domestic Product or Dow Jones Industrials Average shows a similar upward trend. Understanding the overall impact to different types of businesses requires a little more digging.

Gartner analyst David Howe and co-author Howard Rubin have researched IT spending by sector in order to help establish a benchmark for comparisons. They presented their findings at Gartner Symposium ITxpo.

"Our research has shown that the overall industry average is to spend 62%, 24%, and 14% to run, grow, and transform the business," says Howe. "The key to making good business decisions is to understand where you stand with respect to other companies in the same sector. To stay competitive, you need to be in the same ballpark when it comes to basic operating costs while looking for ways to grow and transform through IT without busting your budget," according to Howe.

Measuring IT performance in terms of cost is not simple math. You must take other factors into consideration. To answer the question of where the IT dollars are going, you must understand the difference between basic operating costs (run) vs. investments to grow and/or transform the company.

Tune Up

Where do you look to improve IT performance? One key aspect, according to Gartner, is to stay agile. In a highly volatile economic environment, agility could mean the difference between rolling with the punches and taking a sucker punch. Maintaining IT agility means closely monitoring fixed vs. variable costs. Looking for opportunities to outsource nonessential functions could help even out an imbalanced situation.

Another observation from Gartner's research is that there are very few big IT trends. In the past there were next-generation CPU chips or 10X faster network hardware that promised instant performance increases. Today the tendency is more toward "hot spots" driven by sector needs or regional demands. Again, understanding your specific industry and the key drivers will help place your company in the right light.

How do you know when it's time to do a major technology upgrade? It's really not that different than knowing when to trade in that old reliable car with 150,000 miles on it. While it still works, you're probably spending a considerable amount on maintenance and haven't really stopped to count the cost of breaking down on the freeway or, worse yet, on the family vacation.

Power-saving hardware and server virtualization might be two areas worth considering when investigating upgrades. New advances by Sun Microsystems (www.sun.com) for reducing power requirements in its Opteron-based servers could provide significant savings in operating costs. Couple that with virtualization software for consolidating server functions onto a single high-end server, and you could see a real return on investment in a very short period of time.

Hard Choices

Making a decision to institute a transformational IT change is no small endeavor. Demonstrable benefits will be necessary to get management buy in. Deciding to make a change could be the difference between life and death for some companies. Understanding potential game-changing technologies such as RFID will help your company stay ahead.

Most IT organizations tend to focus on the tactical situation at hand as opposed to a more strategic view, according to the December 2005 Forrester Research report titled "Trends in IT Performance Management." That type of focus indicates a lack of attention to actually measuring performance at any level. If you don't measure your performance, you won't know how you're doing or where to focus your attention.

Big wins from technology aren't without risks. The key to making the right decision is in knowing the risks and how to mitigate them. Many small to medium-sized enterprises could benefit from the research put out by firms such as Gartner and Forrester. They help put in perspective complex issues that require solid research and analysis.

Despite some well-publicized comments to the contrary, IT does matter in most organizations today. Determining how much it matters and what impact it can have will depend in large part on those leading the way.

Gartner's Action Plan

Gartner recommends the following steps to evaluate your IT performance.

Understand where you are with respect to other companies in your sector

- Recognize that some sectors, such as health care, spend 81% just to keep things running
- Identify functional areas where spending is happening

Look across the key areas

- Don't look just at the IT spending under control of the CIO
- Total IT spending includes things such as business intelligence, hardware purchases, etc.
- Direct comparison against peers, correct for geography

Look at specific areas

- Causal drivers/factors
- Scale: smaller companies don't have the buying power of large ones
- Fragmentation, dispersal
- Redundancy
- Excessive labor

Identify actionable items to fix

- Labor cost: outsource
- Redundancy: consolidate

Demystifying Event Logs

Continued from Page 24

He further advises to download trial versions of the tools and evaluate them against your own environment and requirements.

Both Chuvakin and Muscat speak to the value of using automated tools because doing a line-by-line log review manually is unfeasible and at the root of why so many enterprises disregard their event logs in the first place.

Christina Noren, vice president of product management and support for Splunk (www.splunk.com), an IT data search engine, offers up a different approach to event log management and monitoring. Splunk's solution indexes and classifies log event data. She says that enterprises need to get all of their event logs off production systems in real time and not store the logs locally.

"Event logs are subject to compromise on production boxes," according to Noren. "You need real-time centralized access to event log data." While also promoting security best practices, centralized access to event log data is an element of compliance programs.

Noren further advises that you look for a log management tool that classifies and trends log data it hasn't handled previously. She also advises to make logs self-sufficient through automated tools. While Splunk has an easy setup like the other products featured in this article, Splunk doesn't require a professional services engagement for product installation, configuration, and tuning, but you still must integrate into your workflow and develop a search regimen through your log data that is meaningful to your administrators.

Demystifying Your SME's Event Logs

Demystifying event logs requires proactivity with an eye toward retention, review, and automated tools to ensure that your log events are presented in a usable and actionable manner to your data center team.

Muscat notes, "Log management is not just about legal compliance. It's about knowing what is really happening on your IT infrastructure, and to achieve this you need a versatile solution that not only augments your legal compliance efforts but which puts you in a position to perform effective forensic analysis, watch over your system health, and safeguard your information on a 24/7/365 basis. The quest for an effective log management solution costs time and money. Make sure that you are smart enough to get it right the first time."

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WHAT'S HAPPENING

Understanding The Power Needs Of SMEs

Geist Brings PDUs To The SME

by John Brandon

• • •

A POWER DISTRIBUTION unit, or PDU, is perhaps the most important device in a data center. Without one, all of the other equipment—servers, storage devices, optical drives, and monitors—would not run effectively. One company that understands the power needs of small and medium-sized enterprises is Geist Manufacturing (www.geistmfg.com), located in Lincoln, Neb. Since 1948 (when the company was known as Winders & Geist), the company has developed many configurations of PDUs to meet the needs of data centers. In fact, there are more than 1,000 variations with various wattage and outlet configurations.

"There is no single solution for either new data centers or those upgrading," says Tom Kennedy, the director of sales and marketing at Geist. "The important aspect with a manufacturer of power distribution, such as Geist, is to adapt or customize units to meet the requirements of a particular installation, such as combination PDUs that provide power receptacles, power monitors, and environmental monitors all in one unit, and units that provide both onsite and remote monitoring and do not require specific client software."

The company has had several key milestones over the years. For data centers, one was the release of rack-mountable power strips in 1998 used for data storage. Recent innovations include custom-built PDUs and products that use power more efficiently and allow admins to monitor power usage. Newer, three-phase PDUs offer several combinations of NEMA (National Electrical Manufacturers Association) and IEC (International Electrotechnical Commission) receptacles, helping Geist stay on pace with data centers.

"The power requirements have continually changed over the past five to six years from 15 amp to 20 amp and now to 30A and 60A," says Kennedy. "With the trend toward blade servers and increased density, heat dissipation, cooling requirements, and environmental monitoring are an increasingly important aspect of data center planning."

Upcoming Innovations

In the next few years, Kennedy notes, the PDU market will start to seek higher power outputs and more cooling, a challenge for suppliers and data centers alike.

"[One innovation will be] cabinets that provide a flue effect to better utilize the available cooling and concentrate airflow to the required 'U' spaces," says Kennedy. "This will also drive high-tech manufacturers to provide economical monitoring equipment. Equipment that previously cost thousands will become available at a much lower cost, making it feasible to use every cabinet or rack more efficiently. Admins will use temperature and cooling controls to manage and monitor hot spots and control fan operation. Liquid cooling may become viable if it avoids the dreaded combination of water and electricity. Again, environmental monitors—and especially the temperature, water levels (flooding), and humidity—will become increasingly important."

Unique Offerings

Geist differentiates itself from other PDU manufacturers in that it provides excellent guidance to data centers that don't have the time or resources to investigate all of the options available. There's a Web configuration utility online that uses a simple interface to help admins generate a photo, spec sheet, and product recommendation based on specific power requirements. The Power Distribution Product Wizard goes beyond just the simple process of matching a product to current needs and can help admins forecast future expansion needs, as well. On the Web site, admins can determine which specific product number will work in their environment.

A second key differentiator is that Geist has a knowledgeable customer service staff that will investigate a solution for a data center and provide a more detailed quote than just one that lists the recommended products—serving as a power design team that can discuss UL (Underwriters Laboratories) approval ratings and explain design specifications in detail.

The company also publishes installation manuals as PDFs on its Web site, providing a handy means for admins to understand how products must be installed.

Product Lines

Geist products fall into several main categories. PDUs generally come in either horizontal or vertical sizes. For office environments, the company also makes multioutlet power strips, surge suppressors, and wall-mount surge suppressors. A mainstay of the company is the Flexiduct cord management units, available in nine different sizes in bulk quantities, for running power lines through a data center. Electrical tubing and phone/fax extension receptacles are also available.

The RacSense product (www.racsense.com) consists of a PDU with a Web interface that helps admins monitor data center power consumption and any related power risks. The system can be configured to send alarms—even to a PDA—and feed real-time graphical data for PDU access in the data center. RacSense Master is a remote environmental and power monitoring device; RacSense Satellite uses RSM (RacSense Master) and RSE (RacSense Environmental) capabilities for remote monitoring.

The number of products and the extensive Web and customer service support point to one of the challenges in the PDU market: helping admins understand power requirements and wade through specification and product sheets to find what will work for their data centers. Making the wrong decision can lead to business-crippling downtime for all connected systems. "[The challenge is] to provide power distribution units that meet the many local facilities' requirements," says Kennedy. "There's a need to ensure end users, contractors, and consultants that we are knowledgeable about the many configurations and solutions available. In short, that we understand the most efficient power solutions available before the project starts."

Geist seems poised to provide the right products and configurations for those looking for a PDU, especially for small and medium-sized enterprises, and without the hassles of trying to understand current PDU requirements and future plans autonomously.

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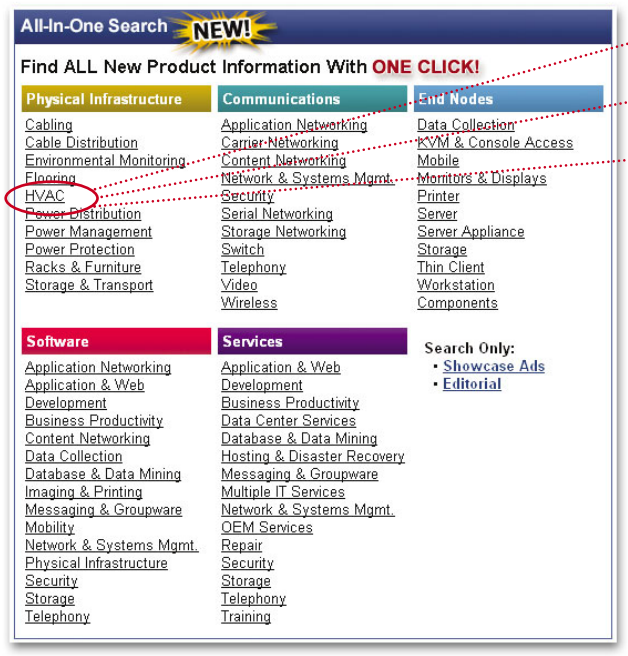

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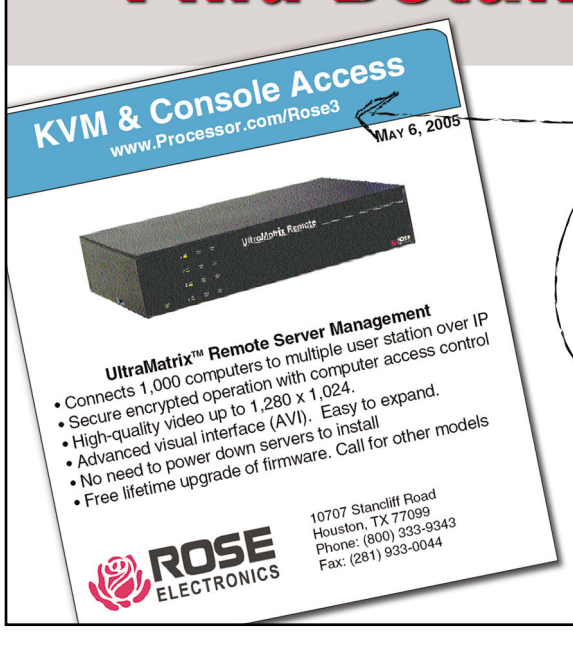

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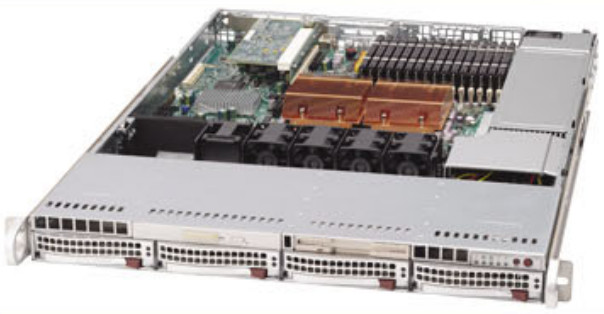

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